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ESSAYS, CASES, AND SELECTIONS.

SIR WILLIAM HAMILTON ON PHRENOLOGY.

Within twenty-five years the position of this *pseudo* science has greatly changed. But, although comparatively it has passed into oblivion, there are still those who profess to have faith in it. Fowler and his corps still display their mapped skulls in Broadway, lecturing occasionally, or examining heads, and reading off the character at so much apiece. It is not long since the popular and brilliant Ward Beecher informed his countless admirers, that phrenological science had been of more use to him, as a moral teacher, than all other studies. Not a few probably accept it, at second hand, as something which has been proved, although they knew not on what grounds.

If phrenology rests on a solid basis, its importance is undeniable. It is a branch of psychology which no student of the mind, healthy or diseased, can safely neglect. If, on the other hand, it be a mere fiction, the sooner it is consigned to its destined limbo, the better it will be for all concerned.

Sir William Hamilton's Lectures on Metaphysics have just been

published in Edinburgh, under the able editing of Messrs. Mansel and Veitch. The extracts which we shall give, in relation to phrenology, are from the Appendix to Vol. I. They are derived from Sir William's Lectures on Phrenology, and from communications of his to various medical publications. The editors thus allude to these remarks in their preface :—

" Apart from the value of their results, these physiological investigations serve to exhibit, in a department of inquiry foreign to the the class of subjects with which the mind of the author was ordinarily occupied, that habit of careful, accurate, and unsparing research, by which Sir William Hamilton was so eminently distinguished."

Willis, it appears, was the first modern physiologist who attempted a new attribution of the mental functions to different parts of the nervous system. Perception and sensation, according to him, reside in the *corpus callosum ;* imagination and appetite in the *corpora striata ;* memory in the cerebral convolutions, &c. Later physiologists have ascribed various and often contradictory uses to the different parts of the brain. Only one of these, however, has any interest for the psychologist. " The exception," says Sir William, " is the celebrated doctrine of Gall. If true, that doctrine would not only afford us a new instrument, but would, in a great measure, supersede the old. In fact, the psychology of consciousness, and the psychology founded on Gall's organology, are mere foolishness to each other. They arrive at conclusions the most contradictory ; inasmuch that the establishment of the one necessarily supposes the subversion of the other." He proceeds to show that, as this doctrine professes to be founded on *sensible facts*, it must be assailed not by reasoning, but by showing the falsehood of the alleged facts. " Such an opinion," he says, " must be taken on its own ground. We must join issue with it upon the facts and inferences it embraces. If the facts are true, and if the inferences necessarily follow, the opinion must be admitted. The sooner, therefore that we candidly inquire into these, the better."

" With these views I many years ago undertook an investigation of the fundamental facts on which the phrenological doctrine, as it

is unfortunately called, is established. By a fundamental fact, I mean a fact by the truth of which the hypothesis could be proved, and, consequently, by the falsehood of which it could be disproved. Now, what are such facts? The one condition of such a fact is, that it should be general. The phrenological theory is, that there is a correspondence between the volume of certain parts of the brain, and the intensity of certain qualities of mind and character; the former they call development, the latter manifestation. Now individual instances of alleged conformity of development and manifestation could prove little in favor of the doctrine, as individual cases of alleged disconformity could prove little against it, because, 1st. The phrenologists had no standard by which the proportion of cerebral development could be measured by themselves or their opponents. 2d. Because the mental manifestation was vague and indeterminate. 3d. Because they had intended, as subsidiary hypotheses, the occult qualities of temperature and activity, so that, in individual cases, any given head could be explained in harmony with any given character. Individual cases were thus ambiguous; they were worthless either to establish or to refute the theory.

"But when the phrenologists had proclaimed a general fact, by that fact their doctrine could be tried. For example, when they asserted, as the most illustrious discovery of Gall, and as the surest inference of their doctrine, that the cerebellum is the organ of the sexual appetite, and established this inference as the basis of certain general facts, which, as common to the whole animal kingdom, could easily be made matter of precise experiment; by these facts the truth of their doctrine could be brought to the test, and this on ground the most favorable for them."

THE DOCTRINE OF THE CEREBELLUM.

Sir William first considers the phrenological doctrine of the cerebellum. His experiments in regard to this organ completely disprove the notions of phrenology. Most of them, however, were made for other purposes than the settlement of this question. His investigations at this point went indeed far beyond those of any professional physiologist, for he weighed, with scrupulous accuracy, more than one thousand brains of fifty different species of animals. He showed that the physiologists were mistaken in supposing that the cerebella of all animals, indifferently, were, for a certain period subsequent to birth, greatly less in proportion to the brain proper than in adults. He was the first to point out the differences in this respect, which mark

different species, and to demonstrate the law which governs these differences.*

The alleged facts on which Gall and his followers establish their conclusion respecting the function of the cerebellum, are as follows:—

1. That female animals of all sorts have this organ, on the average, much smaller, in proportion to the brain proper, than the males. In reply to this, Sir William affirms that he has ascertained, by an immense induction, that in no species of animal has the female a proportionally smaller cerebellum than the male; while, in most species, and this according to a certain law, she has it considerably larger. In man the case stands thus: Women have, on an average, a cerebellum to the brain proper as 1 to 7; men as 1 to 8.

2. The phrenologists allege that in impuberal animals the cerebellum is, in proportion to the brain proper, much less than in adults. This is equally erroneous. In all animals the cerebellum attains its maximum proportion long before puberty.

3. Another assertion, no less groundless, is that the proportion of the cerebellum to the brain proper, in different, species corresponds with the *energy* of the phrenological function attributed to it.

Sir William, having silenced and spiked these three guns of the phrenological citadel, presents the sample of another general fact.

THE ORGAN OF VENERATION IN MAN AND WOMAN.

"The organ of veneration rises in the middle, on the coronal surface of the head. Women, it is universally admitted, manifest religious feeling more strongly and generally than men; and the phrenol-

*To preserve the continuity of the author's argument, we give in a note, these very curious discoveries: "In those animals that have from the first the full power of voluntary motion, and which depend immediately on their own exertions and their own power of assimilation for nutriment, the proportion of the cerebellum is as large, nay larger than in the adult. * * * In the young of those quadrupeds that for some time wholly depend for support on the milk of the mother, and which have at first feeble powers of regulated motion, the proportion of the cerebellum to the brain proper is, at birth, very small. By the end of lactation, however, in these, as in other animals (even man) it attains the full proportion of the adult." The conclusion from it all is, that *the cerebellum is the intercranial organ of the nutritive faculty, and also that it is the condition of voluntary or systematic motion;* the latter opinion being an old one, thus revived and confirmed.

ogists accordingly assert that the female cranium is proportionally higher in that region than the male is." A comparative average of nearly two hundred skulls of either sex proved this assertion to be the reverse of truth. "The female skull is longer; it is nearly as broad, but it is much lower than the male."

THE ORGAN OF DESTRUCTIVENESS.

A comparison of all the crania of murderers preserved in the Anatomical Museum of the Edinburgh University, with about two hundred ordinary skulls indifferently taken, was decidedly favorable to the criminals; showing their destructiveness and other evil qualities to be less than the average, while their moral and intellectual qualities were above it. And this held not only in regard to the common averages, but even when compared with the crania of Robert Bruce, George Buchanan, and Dr. David Gregory.

THE FRONTAL SINUSES.

"I omit all notice of many other decisive facts subversive of the hypothesis in question; but I can not leave the subject without alluding to one fact, which disproves at a blow a multitude of alleged organs, affords a significant example of the accuracy of phrenological statement, and shows how easily manifestation can, by the phrenologists, be accommodated to any development, real or supposed. I refer to the frontal sinuses. These are cavities between the tables of the frontal bone, resulting from a divergence of the tables. They are found in all puberal crania; their extent and depth are variable, and wholly inappreciable from without. Fortunately, or unfortunately, the phrenologists have placed seventeen of their smallest organs over the region of the sinus, that is behind it. How is it possible that eye or finger can detect minute degrees of cerebral development beyond these invisible, unknown cavities, of various extent? The phrenologists were not acquainted with the anatomy of the part. Gall asserted that the sinus was often absent in men; seldom or never found in women. Spurzheim declares that the frontal sinuses are found only in old persons, or after chronic insanity."

To this the great philosopher opposes his own observation. An inspection of several hundred crania has shown that *no skull is without a sinus*. Such indeed is the common doctrine of the anatomists. Neither do they increase with age.

In three conclusive articles, which appeared in the *Medical Times* during the year 1845, Sir William Hamilton exhausts the argument from the frontal sinus. The sinuses "are not," he says, "mere inorganic vacuities; they constitute a part of the olfactory apparatus; they are lined with a membrane, which is copiously supplied with blood, and secretes a lubricating mucus, which is discharged into the nose. Though rarely if ever absent, their size in every dimension varies to infinity. In superficial extent the sinus sometimes reaches hardly above the root of the nose; sometimes it covers nearly the whole forehead, penetrates to the bottom of the orbit, and turning the external angle of the eyebrow, ends at the juncture of the frontal and parietal bones. Now it is small, or it is almost invisible on one side; and on the other, perhaps, unusually large." After describing many other varieties he adds, that "no one can predict, from external observation, whether the cavity shall be a lodging scanty for a fly, or roomy for a mouse."

He denies positively the assertion that the extent of the sinus is indicated by a ridge, or crest, or blister in the external bone. Protuberances there may be, but they have "no certain, nor even probable relation to the extent or even existence of any vacuity below." The external ridge is often merely a sudden outward thickening of the bony wall. In fact, and this is very important, no part of the cranium presents greater differences in thickness than the plates and diploë of the frontal bone. In view of these things, he thinks the phrenological philosophers may well exclaim: "*Fronte nulla fides!*"

Nor are these the only facts which have given a medical and historical importance to the frontal sinus, making it surprising, indeed, that the founders of phrenology should have ignored its very existence. It is well known to medical men that this cavity, invisible to all, and unsuspected by most persons, "is sometimes occupied by stony concretions,—the seat of ulcers, cancers, polypus and sarcoma. When acutely inflamed the sensibility of its membrane is painfully intense. Of this every one knows something who has been affected with catarrh. The mucosity of this membrane, the great extent and security of the caverns, and their openings into the nose, render the

sinuses a convenient harbor for many parasitic animals. Here, safe from all attack, they lay their eggs and find food and shelter for their large and growing families. Thus it seems that "maggots (other than phrenological) are bred and fostered in these genial labyrinths. Worms in every loathsome diversity—reptiles armed with fangs—crawlers of a hundred feet—ejected in scores, and varying in length from an inch to half an ell, by their burrowing, their suction, and their erosion, produce excruciating headache, convulsions, delirium, and phrenzy." We have even the names (frightful to read) of some of the horrid insects, "recorded by a hundred observers as finding in these 'antres vast,' these '*spelunci ferarum*' a birth-place or an asylum." In a curious note upon this passage, Sir William refers to the prescription which the Delphic oracle gave Demosthenes for his epilepsy, as showing that the Greeks were aware of the existence of worms in the frontal sinus of the goat. Their generation in the cavities of the forehead, and the headaches which they caused, were known to the physicians of India. "Among the moderns," he adds, "my medical ignorance suggests more authorities than I can almost summon patience simply to name." He then enumerates seventy-five authors, terminating with &c., &c., to show that the list is incomplete. Another fact in regard to the inhabitants of the sinus, "striking in itself, and not without significance in relation to the present inquiry, is this, that these intruders infest the sinuses of women, and more especially before the period of full puberty."

Were there but one organ in the rear of these frontal sinuses, and that a larger one than any which phrenology pretends to have discovered, it is plain that an attempt to estimate its development would be nothing less than ridiculous. "But this is nothing. Behind these spacious caverns, in utter ignorance of the extent, frequency, and even of the existence of this impediment, the phrenologists have placed, not *one large*, but *seventeen* of their *smallest* organs."

"By concentrating all their organs of the smallest size within the limits of the sinus, they have, in the first place, put the organs whose range of development is least, behind an obstacle whose range of development is greatest.

"In the second place, they have at once thrown one-half of their

whole organology beyond the range of possible discovery and possible proof.

"In the third place, by thus evincing that their observations on that one-half had been only illusive fancies, they have furnished a criterion of the credit that may be accorded to their observations on the other half. In this, as in other portions of their doctrine, they have shown that *manifestation* and *development* are quantities, which (be they what they may) can always be brought to an equation.

"Fourthly, as if determined to transcend themselves, and find 'a lower deep beneath the lowest,' they have placed the least of their least organs at the very point where this great obstacle is most potent. The sinus is almost always deepest towards the inner angle of the eyebrows, and it is just there that the minute organs of size, configuration, weight, resistance, &c., are said to be.

"In the fifth place they have been quite as unfortunate in the location of the other minute organs. These they arranged in a series along the upper edge of the orbit, where, independently of the sinus, the bone varies more in thickness than in any other part of the skull. Here have they packed those organs more closely than peas in a pod, which they scarcely exceed in size. If these pretended organs actually and severally protruded from the brain, (which they do not,) if there were no sinus intervening, (as there is,) if they were under the thinnest part of the cranium (instead of the thickest,) still these petty organs could not reveal themselves by showing any elevation, and especially any sudden elevation of superincumbent bone. They might possibly indent the inner surface, and cause a slight attenuation of the bone—and this is all they could do. The glands of Pacchioni, as they are improperly called, which rise on the coronal surface of the encephalos, and are often even larger than the bodies in question, though they attenuate to the thinnest, never elevate in the slightest the external bony plate."

And yet the phrenologists affirmed that these diminutive organs of theirs would show their distinct and relative developments through the obstacle of two thick bony walls and a large intervening chamber—the varying difference of the impediment being often greater than the whole diameter of the alleged organs.

It is evident that both Gall and Spurzheim were at first wholly ignorant of the existence of the frontal sinus. Gall placed his first organs in that region. Both had given their organology to the world before they found out that there was such an obstacle in their path. It was too late to retract, so they endeavored to elude. In

this attempt they floundered on from one blunder to another. Their very errors were as inconsistent with each other as they were contrary to fact. From this difficulty, which they could not but see, yet dared not acknowledge, they took refuge in the realms of fiction. The exploits of phrenology in this department "are unparalleled," says Sir William, "in the history of science. These fictions are substituted for facts, the simplest and most palpable; they are substituted for facts which, as determining the competency of phrenological proof, ought not to have been rejected without a critical refutation by the founders of the theory."

We pass over the enumeration of these fictions, which Sir William Hamilton gives under four heads, with the authorities for each, and with the overwhelming proofs that they are fancies and not facts.

How he had qualified himself to speak on this part of the subject, we learn from the statement that all the crania in the public Anatomical Museum, at Edinburgh, had been subjected to his inspection, many of them being first laid open in the frontal region for his special examination.

Nor was this all. Fifty crania, originally taken from the catacombs of Paris, had been selected by Dr. Spurzheim as illustrating the development of the various phrenological organs. It was probably through some mistake that these skulls, with their supposed developments carefully marked upon them by Spurzheim's own hand, were sent from the Jardin des Plantes to the Royal Museum of Natural History, in Edinburgh. These skulls, with Prof. Jameson's permission, Sir William carefully examined. These fifty skulls are presented in a tabular view, which shows how many of the pretended phrenological organs were covered, or nearly covered, or to some extent affected by the frontal sinus in each case. This table might be greatly extended, but he deems it sufficient, because :—

1. It is a complete and definite collection.

2. It is a collection authoritative in all points against the phrenologists.

3. No one can object to it as affording only a selected and partial induction in a question relating to the frontal sinus.

4. It is a collection which every body can see and examine.

5. In all the skulls a sinus has been laid open on one side, to its full extent; the capacity of both sides is thus easily determined, and at the same time, with the size of the cavity, the thickness and salience of the external frontal table remain apparent.

Sir William Hamilton affirms that the system of phrenology is a result derived originally, not from experience, but from conjecture; "that Gall, instead of deducing the faculties from the organs, and generalizing both from particular observations, first of all excogitated a faculty, *a priori*, and then looked about for an organ with which to connect it. In short, phrenology was not discovered, but invented. You must know," he tells his pupils, "that there are two faculties, or rather two modifications of various faculties, which cut a conspicuous figure in the psychologies of Wolf and other philosophers of the Empire;—these in German are called *tiefsinn* and *scharfsinn*—literally *deep sense* and *sharp sense*, being what English phrenology calls causality, and comparison. Now what I wish you to observe is, that Gall found these two clumsy modifications of mind ready shaped out in the theories of philosophy prevalent in his own country. In 1798 he published a letter to Retzer, of Vienna, wherein he for the first time promulgates the nature of his doctrine. Here we catch him—*reum confitentem*—in the very act of conjecture. 'I am not yet,' he says, 'so far advanced in my researches as to have discovered special organs for *scharfsinn* and *tiefsinn*—for the principle of the representative faculty, (*Vorstellungsvermögen*, in German philosophy), for the different varieties of judgment, &c.' When Froriep published his *Darstellung* in 1800, the coy organs of *scharfsinn* and *tiefsinn* had been found. Of the twenty-two organs named by Froriep, nearly all have since received a different location, or been wholly thrown out. Many of those organs were placed at the base and near the centre of the brain; and, of course, wholly beyond the range of observation. When the hypothesis first appeared, it had indeed several tiers or stories of organs,—

some at the base, some about the centre, and others on the surface of the brain. When Gall lectured in Göttingen he encountered a troublesome critic. The lecturer measured the development of an organ by its prominence. 'But, how do you know,' said the learned Meiners, 'that this prominence of the outer organ indicates its real size? May it not be merely pressed out, though itself of inferior volume, by the large development of an organ below it?' The objection was evidently checkmate. It was necessary to begin a new game, with the pieces differently arranged. Accordingly all the organs at the base and about the centre of the brain were withdrawn, and the whole set were made to run very conveniently upwards and outwards from the lower part of the brain to its outer circumference.

"Nor is it in their position only that the phrenologic organs underwent a change. Their variations in shape were even more remarkable. In the plates of Gall's great work they are either round or oval. In more recent casts and plates they are given with every variety of angular modification. Changing the order of the last two words, we may apply to the phrenologist the line of Horace:—

"'Diruit, ædificat, mutat quadrata rotundis.'

"So much for phrenology—for the doctrine which would substitute the callipers for consciousness, in the philosophy of man. And the result of my observation,—the result at which I would wish you also to arrive,—I can not better express than in the language of the Roman poet:—

"'Materiæ ne quære modum, sed perspice vires
Quas ratio, non pondus habet.'"

Sir William takes leave of the subject with the following candid remarks: "In what I have said in opposition to the phrenological doctrine, I should, however, regret if it could ever be supposed that I entertain any feeling of disrespect for those who are converted to this opinion. On the contrary I am prompt to acknowledge that the sect comprises a large proportion of individuals of great talent; and I am happy to count among these some of my most valued and

respected friends. To the question, How comes it that so many able individuals can be believers in a groundless opinion ? I answer, that the opinion is not wholly groundless. It contains much of truth—of old truth, it must be allowed. It is no disparagement to any one that he should not refuse to admit facts so strenuously asserted, and which, if true, so necessarily infer the whole conclusions of the system. As to the mere circumstance of numbers, that is comparatively of little weight—*argumentum pessimi turba*—and the phrenological doctrines are of such a nature that they are secure of finding ready converts among the many. There have been, also, and there are now, opinions far more universally prevalent than the one in question, which we do not on that account consider to be undeniable."

DISTINGUISHED FRENCH ALIENISTS ON GENERAL PARALYSIS. From the Reports of Discussions by the Medico-Psychological Society of Paris, in the Annales Medico-Psychologiques, 1858–59.

M. Parchappe. * * * In all the cases of paralytic insanity that have come under my observation, amounting to three hundred and twenty-two, I have constantly found inflammatory softening, more or less extensive, of both hemispheres. In many cases, if I had confined myself to appearances simply, and to the modes of examination commonly employed, I might have overlooked a characteristic lesion. The membranes were healthy, and easily detached from the surface of the brain without producing that decortication which commonly reveals, on the slightest tractile effort, the softened condition of the cortical substance. The cerebral surface was not altered in color ; its consistence seemed even to be augmented ; the brain cut in slices appeared perfectly sound ; but careful examination, and recourse to the following procedure have enabled me in

these cases to prove positively the existence of softening of the middle portion of the cortical substance. The handle of a scalpel, slightly engaged in one-half the thickness of the cortical substance, enabled me, by gently raising the outer portion of this substance, to detach it over a greater extent than that in which the action of the instrument was exercised, and thus to cause that decortication which is so readily produced in most cases by simple traction exerted upon the membranes.

The efficiency of this procedure for demonstrating the existence of softening is also shown in ordinary cases, when decortication is produced by simple traction of the membranes. This result is obtained principally on the free margin of the convolutions. But it would be a great mistake to suppose that softening only existed in cases where decortication is produced by traction on the membranes. Softening of the cortical substance is quite as marked in many points of the convolutions corresponding to the anfractuosities, and of the free margin of the convolutions, from which the membranes may be detached without causing decortication. In all these points, by raising with the handle of the scalpel the external portion of the cortical substance, the existence of softening may be proved with the utmost certainty. I believe that all the instances of perfect integrity of the cortical substance in paralytic insanity which have been related, can be explained by an error of diagnosis during life, or the insufficiency of the examination after death.

In regard to the use of the microscope for determining the portion of the brain affected in general paralysis, I believe it may be said that the instrument is not indispensable for the solution of the question. Doubtless much assistance and many discoveries may be expected from microscopic researches. I am convinced that the microscope will prove, if it has not already done so, the inflammatory nature of the changes of the cortical substance in general paralysis. But it is not, in my opinion, the province of the microscope to replace ordinary anatomy. The eye aided by the microscope is to me only an auxiliary to the study of anatomy by the naked eye, and by the touch; and microscopic observations, in order that they may have a

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scientific value, must never contradict but confirm, by explaining, and sometimes by modifying the fundamental doctrines of pathological anatomy.

All the facts afforded by pathological anatomy agree in affirming the inflammatory nature of the characteristic lesion of the cortical substance of the brain in general paralysis. The special character of this lesion is to effect simultaneously both cerebral hemispheres, principally in the anterior and middle lobes, and to be associated nearly always with an inflamed condition of the meninges, frequently with inflammatory softening of the gray substance, of the intra-cerebral ganglia, of the cerebellum, and of the medulla spinalis; with a granular condition of the ventricular walls, and with induration of the white substance, and finally very frequently with atrophy of the convolutions.

The development of the disease is peculiar as regards the succession and connexion of the symptoms, the structural changes, and the termination of the malady. Mental disorder is constant from the first, at least under the form of impairment of the memory and judgment; and very frequently under that of maniacal or melancholiac excitement. This impairment of the intellectual faculties goes on increasing until it ends in their complete extinction. The lesion of motion only becomes very apparent after that of the intelligence. It may be entirely wanting at the commencement, so that the most experienced alienists are cometimes kept in doubt during many days or even weeks as to the real nature of the disorder, by reason of the absence of every symptom of paralysis. In most cases the lesion of motion is first manifested in the power of articulation, and afterwards extends to the other voluntary movements, especially to those concerned in walking and standing, though it sometimes happens that the gait is affected, while as yet the power of speech remains almost intact. It is not unusual for the powers of locomotion and speech to be affected simultaneously. Sometimes the paralysis is more marked on one side, simulating hemiplegia. Sometimes the motion of the iris is affected, producing unequal dilatation of the pupils. The muscular lesion always goes on increasing in extent and intensity, as the disease becomes more aggravated. * * *

In general, and except accidentally in the state of congestion, the disease is not accompanied by a true febrile movement, although my investigations of the state of the pulse among the insane have led me to notice a slight increase of its frequency in those effected with general paralysis. But one of the most striking symptoms of the disease, is the important part performed in its development by cerebral congestion. Very frequently an attack of congestion is the first symptom of paralytic insanity, and in that way may be explained the large number of cases of insanity attributed to apoplexy in the table of causes kept at the Bicêtre, before the disease began to be recognized. The frequency of cerebral congestion at the outset of general paralysis is so well established that I have frequently been able to foretell the speedy manifestation of paralytic symptoms in cases where the attack of insanity, as yet unimplicated with paralysis, and sometimes even when very slight, had been preceded or accompanied by cerebral congestion. These attacks are generally renewed several times during the course of the disease, and after each recurrence leave the patient with a considerable aggravation of all the symptoms. * * * The inflammatory action, which is set up from the first in the cortical substance of both hemispheres, at once produces the pathological change known by the name of softening, which softening is constant and unceasing in its progress. In the majority of cases, and in the first periods of the disease, the softening is found at the surface on the free margin of the convolutions, and its existence is manifested by flakes and layers of the softened cerebral substance, which the membranes bring with them when they are removed. But from the outset of the disease the softening is invariably found in the mass of the cortical substance, generally in its middle portion, and the traction upon the membranes, pressure with the finger, or the introduction of the handle of a scalpel readily causes the separation of layers of the cerebral substance, whose thickness equals about half that of the cortical portion. As the disease progresses the softening may invade the cortical substance in its entire thickness, in which case pressure with the finger causes complete decortication of the convolutions. The softening of

scientific value, must never contradict but confirm, by explaining, and sometimes by modifying the fundamental doctrines of pathological anatomy.

All the facts afforded by pathological anatomy agree in affirming the inflammatory nature of the characteristic lesion of the cortical substance of the brain in general paralysis. The special character of this lesion is to effect simultaneously both cerebral hemispheres, principally in the anterior and middle lobes, and to be associated nearly always with an inflamed condition of the meninges, frequently with inflammatory softening of the gray substance, of the intra-cerebral ganglia, of the cerebellum, and of the medulla spinalis; with a granular condition of the ventricular walls, and with induration of the white substance, and finally very frequently with atrophy of the convolutions.

The development of the disease is peculiar as regards the succession and connexion of the symptoms, the structural changes, and the termination of the malady. Mental disorder is constant from the first, at least under the form of impairment of the memory and judgment; and very frequently under that of maniacal or melancholiac excitement. This impairment of the intellectual faculties goes on increasing until it ends in their complete extinction. The lesion of motion only becomes very apparent after that of the intelligence. It may be entirely wanting at the commencement, so that the most experienced alienists are cometimes kept in doubt during many days or even weeks as to the real nature of the disorder, by reason of the absence of every symptom of paralysis. In most cases the lesion of motion is first manifested in the power of articulation, and afterwards extends to the other voluntary movements, especially to those concerned in walking and standing, though it sometimes happens that the gait is affected, while as yet the power of speech remains almost intact. It is not unusual for the powers of locomotion and speech to be affected simultaneously. Sometimes the paralysis is more marked on one side, simulating hemiplegia. Sometimes the motion of the iris is affected, producing unequal dilatation of the pupils. The muscular lesion always goes on increasing in extent and intensity, as the disease becomes more aggravated. * * *

In general, and except accidentally in the state of congestion, the disease is not accompanied by a true febrile movement, although my investigations of the state of the pulse among the insane have led me to notice a slight increase of its frequency in those effected with general paralysis. But one of the most striking symptoms of the disease, is the important part performed in its development by cerebral congestion. Very frequently an attack of congestion is the first symptom of paralytic insanity, and in that way may be explained the large number of cases of insanity attributed to apoplexy in the table of causes kept at the Bicêtre, before the disease began to be recognized. The frequency of cerebral congestion at the outset of general paralysis is so well established that I have frequently been able to foretell the speedy manifestation of paralytic symptoms in cases where the attack of insanity, as yet unimplicated with paralysis, and sometimes even when very slight, had been preceded or accompanied by cerebral congestion. These attacks are generally renewed several times during the course of the disease, and after each recurrence leave the patient with a considerable aggravation of all the symptoms. * * * The inflammatory action, which is set up from the first in the cortical substance of both hemispheres, at once produces the pathological change known by the name of softening, which softening is constant and unceasing in its progress. In the majority of cases, and in the first periods of the disease, the softening is found at the surface on the free margin of the convolutions, and its existence is manifested by flakes and layers of the softened cerebral substance, which the membranes bring with them when they are removed. But from the outset of the disease the softening is invariably found in the mass of the cortical substance, generally in its middle portion, and the traction upon the membranes, pressure with the finger, or the introduction of the handle of a scalpel readily causes the separation of layers of the cerebral substance, whose thickness equals about half that of the cortical portion. As the disease progresses the softening may invade the cortical substance in its entire thickness, in which case pressure with the finger causes complete decortication of the convolutions. The softening of

the cortical substance generally progresses from before backwards, occupying at first the extremity of the anterior lobes, and extending along their convex surface, then by way of the middle lobes until it reaches the posterior surface of the hemispheres. At a more advanced period the softening sometimes extends to the gray matter of the corpora striata, of the optic thalami and the medulla spinalis, and it not unfrequently affects the cortical substance of the cerebellum.

The softening of the cortical portion, and the changes of this substance or of the meninges offer, in the first or acute stage, all the characters of an inflammatory condition ; a rose, lilac, or even amaranth color of the cortical substance, hyperæmia, pointed injection, extravasations of blood in the cortical substance or in the membranes, adhesion of the pia mater to the surface of the convolutions, sometimes separation of the pia mater, and collection of a sanious liquid between it and the cortical substance. At a more advanced period, if the patient's life is prolonged, hyperæmia is no longer found. The softened cortical substance has a pale, dirty-gray or yellowish tint. At this period of the disease are found atrophy of the convolutions, serous effusion in the anfractuosities, with thickening and opacity of the membranes.

The connexion between the symptoms and lesions, which is manifested by the prominent features of the disease, deserves to be attentively studied. The mental disorder, under the form of mania or melancholia, coincides with the period when the alteration of the cortical substance is only superficial, and of limited extent. The loss of mental power, as well as the paralysis, is intimately connected with the depth and extent of the softening of the cortical substance. The difficulty of speech is generally dependent upon a lesion of the anterior lobes. I have frequently observed, in cases where the paralysis was more marked on one side so as in some degree to resemble hemiplegia, a greater extent of softening of the cortical substance of the opposite side. Finally, one of the most constant characters of general paralysis of the insane is its fatal termination.

In giving this opinion I do not wish to discourage others more than

myself. I believe we ought to treat general paralysis, in its first stage, as we would a curable disease. But though I have conformed to this rule, I have not been so fortunate as to obtain a single positive and certain cure. The fatal termination of general paralysis has this peculiarity, that it takes place more or less suddenly by cerebral congestion, or comes on gradually by a slow decline, towards the end of which gangrenous eschars are frequently formed on all parts of the body subject to pressure, while life is only manifested by vegetative phenomena ; a condition which I have designated as *cerebral marasmus.*

This rapid sketch of the principal characters which belong to the essential elements of general paralysis, appears to me to be an unanswerable proof of the necessity of referring it to a distinct nosological species. It is in fact a morbid entity, different from all others, a disease which is produced by causes which bring on over excitement of the brain, generally in men, and during the adult period of life ; whose symptoms may be summed up in general and simultaneous lesion of the intelligence, the voluntary motions and sensibility ; which has for its seat the cortical substance of the hemispheres, and for its constant anatomical character inflammatory softening of the cortical substance of both hemispheres, which, aggravated by cerebral congestions, causing every day a more marked impairment of motion, intelligence, and sensibility, terminates fatally in an attack of congestion, or by cerebral marasmus.

When, in the course of the year 1838, I became convinced that general paralysis was constantly characterized by inflammatory softening of the cortical substance of both hemispheres, and that the affection constituted a distinct nosological species, I felt strongly tempted to give it a special name, expressive of its seat and nature, and of the pathological alteration which is essential to it. At this period Dr. Bayle had referred general paralysis of the insane to meningitis ; Dr. Calmeil had attributed it to encephalitis, of which he could not at first positively determine the seat and character, but which, in 1841, he thought himself warranted in designating as *chronic diffused peri-encephalo-meningitis.* If I had given to

general paralysis the name of general cortical cerebritis, I would have indicated the principal result of my pathological researches, and could at once, and without the possibility of confusion, have distinguished the results obtained by my predecessors, and especially those which have led Dr. Belhomme to designate the disease by the name of meningo-cerebritis. I have resisted this temptation, preferring to my own interest that which appeared to be for the benefit of science, and have given to the disease the name of paralytic insanity.

The following considerations have induced me to follow this course. In the first place, I do not think it possible to sever the close connection between the disease and simple insanity, in both of which the predisposing and exciting causes are the same. The disease frequently begins with intellectual disturbance, exempt from all complication with paralysis; and during days and weeks the patient, who may be in the end attacked with general paralysis, can only be considered and treated as if affected with simple insanity. The paralytic symptoms are sometimes developed after a long duration of ordinary mania, and I have met with cases of sudden invasion of general paralysis after the patients had been a long time affected with simple dementia. The disease has the same seat as insanity, namely, the cortical substance of the hemispheres.

Though simple insanity may not be characterized by any constant change in the cerebral structure, nevertheless the alterations which are frequently found in the brains of the insane, and which, as some observers assert, are always found there, have the greatest analogy with the alterations which are met with in paralytic insanity. These are hyperæmia and thickening of the membranes, hyperæmia or decoloration of the cortical substance, induration of the white substance, atrophy of the convolutions, and collections of serum in the anfractuosities of the convolutions. Besides, it is essential that the importance of appreciable organic lesions should not be overrated. Because no constant structural change is found in the cortical substance in simple insanity, which is therefore classed with the *neuroses*, and considered a purely functional disorder, shall we therefore conclude that morbid action can be set up without struc-

tural change in the organ? But functional passes into structural disease in the lowest grades of dementia, by atrophy of the convolutions. In my opinion, simple insanity from being a purely functional disorder, becomes organic in those cases in which it becomes complicated with general paralysis.

Moreover it does not appear to me to be possible to include general paralysis in the class of phlegmasiæ, and in the genus of cerebral inflammation. The disease is apyretic; it is not accompanied at its origin by bilious vomitings, so usual in meningitis, and so frequent in encephalitis. It does present the group of acute febrile symptoms which characterize frank inflammation of the meninges, and that of the white or gray cerebral substance. True encephalitis is generally partial, and occupies only one hemisphere; it affects commonly both the cortical and medullary portions of the brain, or of the cerebellum. The cases of inflammation of the cortical substance of both hemispheres that have been cited in the treatises on encephalitis, are for the most part cases of unrecognized general paralysis. In encephalitis the paralysis is generally confined to one side of the body, and is more marked at the onset than in general paralysis, and is usually accompanied with contractions. The course of true encephalitis is rapid; it continues only a short time, while general paralysis of the insane lasts sometimes for years. These are the considerations which determined me, in 1838, not to refer general paralysis unconditionally to inflammation of the brain, and not to separate it too rigidly from simple insanity, and which still compel me to persist in this determination. * * *

M. Delasiauve.—I will be brief, and will confine myself to the question as stated,—What is general paralysis? Does the group of symptoms described under this denomination deserve to occupy, with a special title, a distinct place in the catalogue of nervous disorders? May not the muscular enfeeblement be only a complication of the mental disorder? Do they alone characterize the affection, or are they not merely the necessary and inevitable, or at least the direct consequence of the nervous lesion? These questions present only another aspect of the same problem, and their solution will only be

another mode of arriving at the same point,—that of determining the nature of general paralysis.

Much importance has been attached to the seat and character of the structural changes. That which, according to Bayle, is the result of chronic meningitis, is caused, according to Delayé, by a molecular change of the cerebral tissue, especially of the gray substance, and according to Calmeil, by encephalitis or meningo-encephalitis. M. Parchappe, on the contrary, supported by numerous autopsies, maintains that the pathological lesion consists in softening of the cortical substance. A lesion that corresponded in its phases to all the changes of symptoms would certainly be a great discovery. A disorder which so speedily becomes general ought manifestly to depend upon an organic change—a molecular transformation, attacking simultaneously both hemispheres. In what does this change consist? In an affection which continues for years, and gives rise to such frequent and such formidable congestions, is there not reason to fear that effects may be mistaken for causes, and that the disease may be attributed to changes of structure, which are themselves only its consequences? This I am led to believe in regard to the chronic meningitis of Bayle, which does not, however, deprive our lamented brother, who was also my valued friend, of the great merit of having been the first to describe general paralysis, and of having so well traced its history, that, with the exception of disputed points, he has left nothing to be added by his successors. The existence of encephalitis does not seem to be better established. All inflammations are at first local and circumscribed. Extending gradually as in general paralysis, it ought, a long time before extending from one lobe to another, and to those of the opposite side, to be manifested by limited signs. But we see from the beginning the muscular defect, though still obscure, showing itself in different parts of the system. I have always preferred the opinion of Delayé, who, while locating the disease in the cerebral mass, and particularly in its superficial portions, has not ventured to decide upon its nature. In the hospital Bicêtre, where there are so many deaths of general paralysis, I have, in spite of the obstacles often opposed to autopsies,

nevertheless had occasion to examine the brains of a great number of subjects. All kinds of lesions have been presented to my observation, but there was nothing constant, and frequently it has been impossible not to remain in doubt touching their existence. My colleague, M. Moreau, must remember two cases which we examined together, in which we did not think ourselves justified in deciding upon the presence of primary lesions. The cortical substance often indeed presents slight softening. But if it does yield to pressure with the handle of the scalpel, in numerous instances probability permits us to attribute this circumstance as well to serous infiltration of the tissues as to morbid degeneration. The wasting of the convolutions, and especially the decoloration of the gray substance, contrasting infinitely less with the white than in the normal condition, were the changes that appeared to me to be the most constantly present. Are these due to latent inflammation? Whatever may be the authority of the recent microscopic researches of M. Calmeil, this question is still in my opinion undecided.

It appears to me more probable that this is one of those defects of nutrition, the mystery of which has not yet been unraveled. Every one has observed cerebral congestions, so common among the paralytic insane. It seems probable that this complication has not yet received its true explanation. Most authors consider the paralytic symptoms as dependent upon the congestion, when it occurs in the onset, and attribute to it an aggravating influence over the disease. In my opinion its mode of production is different, and of such a nature, if properly explained, as to throw much light upon some points which are imperfectly understood. For many reasons I am induced to believe that these congestions differ essentially from those of an apoplectic nature. Caused by a rush of blood, which commonly takes place towards a limited portion of the brain, the latter are of an active kind; and as they attack the patient whilst in full health, when they disappear speedily the intellect does not materially suffer. The congestions of general paralysis, on the contrary, are entirely passive in their nature, and instead of being primary, appear to me to be subordinate to a pre-existing condition of the

brain, whose tendency is to produce embarrassment of the circulation, and stasis of the blood in the cerebral vessels. * * *

This leads me to notice some points of the learned discourse of M. Parchappe. Hesitating as to the choice of a name, he inclined to the term cerebritis, but preferred that of paralytic insanity, so as to avoid severing the connexion which exists between the mental and physical phenomena. What I have already said will show the incorrectness of the first of these designations. Inflammation is not certainly present, and it may be asked, while recognizing its elements, if they may not be produced by the congestion itself forming by its long continuance a sub-inflammatory reaction? If inflammation were really present would we have the same consequences? Under whatever aspect we regard them, are there not differences which compel us to make a distinction between the two categories, and to apply a special qualification to the variety we are engaged in discussing?

The term paralytic insanity does not appear to be more appropriate. It has often been remarked that words which have passed into common use are generally the most correct. That of general paralysis is especially of this character. It answers to the prominent symptoms, and sufficiently indicates the mental disorder. Without prejudging the nature of the disease, and being readily comprehended, it has the advantage of realizing the conditions of a good definition, by suiting under its most obvious meaning *soli et toti definito.*

Is it so with the appellation substituted by M. Parchappe? Without regard to the anatomical lesion, and to the difference of symptoms, does it not confound all cases in which mental disorder co-exists with paralysis? Our honorable colleague does not seem to have escaped entirely this inconvenience. In a special article on the diagnosis, in the "*Annales Medico-Psychologiques,*" 1851, I was the first, perhaps, to attempt to distinguish *pseudo*-general paralysis from the true idiopathic affection. M. Lasègue, in a well-written thesis, has pursued the same course, and M. J. Falret, in his inaugural dissertation going still farther, and eliminating under distinct titles all

the bastard forms, admits, as the true type of the disease, that only which, supervening at certain periods of life, developes itself in an irregularly progressive manner, and terminates almost invariably after a comparatively brief period in a fatal issue.

M. Baillarger—Commenced by remarking that under the name of general paralysis, cases were described, in appearance at least, very dissimilar. It was sufficient, he said, in order to prove this, to compare the two classes of cases in which the symptoms are most opposite: the first of these classes comprises all cases of ambitious mania accompanied by some slight symptoms of paralysis; the second includes those of simple and primary paralytic dementia. The symptoms in the two cases are as different as possible—exaltation of the faculties opposed to mental enfeeblement, and augmented muscular action contrasted with paralysis. M. Baillarger then compared the anatomical lesions in ambitious mania and in paralytic dementia; he found in the former case hyperæmia and turgescence of the brain; in the latter atrophy of the same organ, with grave lesions of its substance. On the other hand, if it is considered that ambitious mania does not terminate inevitably in paralytic dementia, and that it consequently has a separate existence; and that besides paralytic dementia is every day met with, without ambitious mania, the conclusion must be admitted that the two pathological conditions ought to be distinguished, since their symptoms and anatomical characters are different, and they exist separate and independent of each other. In admitting this distinction, the same opinion would be extended to ambitious mania and paralytic dementia which is already received as regards ordinary mania and dementia. The same reasons are applicable in both cases. M. Baillarger therefore concluded by proposing to make of ambitious mania a special malady under the name of *congestive mania*. Congestive mania would then bear to paralytic dementia the same relation that simple mania does to simple dementia.

M. Belhomme. * * * In 1845, I presented to the Academy of Medicine a memoir of my recent examinations of the brains of the paralytic insane, and I endeavored to show that the structural

change, coinciding with the manifestations of the disease, extends successively to all parts of the brain, not only affecting the cortical substance, which is the first to become diseased, but in addition reaching the deep-seated portions of the organ, as the commissures, which are themselves frequently softened.

I reported in detail fifteen cases, which prove that general paralysis depends upon the alterations which I am about to enumerate. Thickening of the membranes, and their adherence to the cortical substance of the brain, which is removed with them; the different layers of the cortical substance are softened, and present various shades of color, red, yellow and brown. The central portions diseased are the medullary substance, which is strongly injected, of a reddish or yellowish tint, softened in different degrees, sometimes only to a limited extent; and very often one of the hemispheres more altered than its fellow. The ventricles, often distended with serum, the arachnoid lining their walls is often thickened, and the medullary matter in contact with it either harder or softer than natural. The central parts constituting the cerebral peduncle, and the commissure are often altered, the septum lucidum destroyed, the fornix softened to a greater or less extent, the corpora striata atrophied or changed in color, the optic thalami, forming the principal wall of the third ventricle, are more or less softened. The cerebral peduncles are less consistent than in the normal condition; the annular protuberance sometimes partakes of the general condition of hardening or softening; in fine, the fourth ventricle and the rachidian bulb present various degrees of unequivocal hardening or softening, and the cerebellum partakes sometimes of the general diseased condition.

I conclude by expressing the belief that general paralysis is an encephalitis of a particular kind, an inflammation which is developed under the congestive form, a disorganizing hyperæmia which is established slowly, producing at first induration, and afterwards softening of the cerebral substance. At the same time, there is a gradual impairment of all the functions of the brain, motion, sensibility and intelligence.

It only remains for me to say one word in relation to my cases.

After having made out the history of each fatal case of general paralysis, I have reported the autopsy, which was made with the greatest care, and accompanied each case with remarks, observing that the affection which caused the death of the patient was not merely a lesion of the cortical substance of the brain, but that there existed besides material changes of structure in the central portions of the organ. It might be said that the inflammation progresses layer by layer until it reaches the central parts, most essential to life. Thus in the first case, in which the disease ran a rapid course, and in which the post-mortem appearances indicated a very active inflammation of the serous membranes, the brain was rather hardened than softened: this is not the first time that I have noticed that softening does not ensue until a later period of the paralytic affection. In this first case the patient died of suffocation, and I found at the autopsy softening of the fourth ventricle at the point of junction of the cerebral fibres with those of the medulla spinalis.

The fifth case perfectly proves the coincidence of the cerebral lesions with the paralytic symptoms. The paralysis came on slowly, progressively, and life was not threatened until the disease reached the cerebral centres. The autopsy showed an altered condition of the cortical substance, and the annular protuberance and the rachidian bulb were softened. On the 9th of May, 1846, I read before the Academy of Medicine the notes of two fatal cases of general paralysis, the autopsy proving that the brain was profoundly diseased. The softening of the central portion was so marked that it was impossible to distinguish the tubercula quadrigemina, the optic thalami, or the walls of the third and the fourth ventricle, the annular protuberance, and the rachidian bulb were softened, and the cerebellum had lost its normal consistence. * * *

Such, gentlemen, are my views of the nature and seat of general paralysis. They go to corroborate the opinions of others who have preceded me, but I claim in addition the demonstration of profound structural changes, and their connexion with the functional lesions.

M. Baillarger.—M. Parchappe is surprised that I have not mentioned softening of the middle portion of the cortical substance, as one

of the morbid changes met with in paralytic dementia. It is well known, indeed, that in the opinion of our learned colleague, this is the only constant change, and that to which the disease ought to be referred, as its anatomical character. According to my belief, the word softening does not convey a correct idea of the alteration which the cortical substance undergoes in paralytic dementia. This portion of the brain, I believe in the majority of cases, and at certain points, is softer than in the normal condition, but it has not, in the greater number of cases, undergone that change which in pathology is designated as softening. Softening, in fact, implies true disorganization; the molecules glide freely over each other, and the texture of the organ is destroyed. But this is not the case in paralytic dementia, except in a few instances. This opinion was expressed long ago by M. Calmeil. "There is," says he, "a great difference between the condition of the gray substance simply wanting in consistence, and that same substance really in a state of softening."

But, according to the same author, if there is not in general paralysis real softening, even at the points where the gray substance adheres to the membranes, how much less does it exist in cases where there are no adhesions, and which are far from being rare. There is, therefore, properly speaking, no softening. As to the want of consistence presented by the cortical substance, M. Calmeil adds: "A reflexion that leads to the conclusion that want of firmness of the cortical substance is of less importance than was at first supposed is, that many paralytics whose brains were found to be of normal consistence, were as deeply affected, as regards their voluntary movements, as those in whom the gray substance was more or less wanting in consistence." (p. 410.)

It may, besides, be concluded from M. Parchappe's own cases, that softening, that is to say true softening, is not the cause of general paralysis. In a passage of his work, he admits, in fact, that when the cortical substance is sliced vertically, nothing is observable, because the cortical substance is firm, and in a vertical section, nothing is seen but the violet or lilac discoloration, which effaces in one tint the distinctive shades of the two planes, so that nothing

except the change of color is perceived, different from the normal condition. But, I ask, is this the case where the part is really softened?

This explains how such skillful pathologists as MM. Calmeil and Lelut have published cases, in which they declare that they have found no change of consistence; how M. Calmeil, especially in the passage cited above, could declare that many paralytics had brains of the natural consistence and exempt from every alteration. (p. 140.)

Another objection against the opinion of M. Parchappe may be based on the cases which he has himself published; in the descriptions which he has given he does not go so far as to say that the cortical substance is *softened;* he limits himself to saying that it is soft, or very soft. In one of the cases he does not even venture to assert that its consistence is diminished; he only says that it *appears* softer than natural. There are, moreover, six or seven cases in which the condition of the cortical substance is described, without loss of consistence being stated. In fine, in a number of cases induration was met with, instead of softening.

Genuine softening of the cortical substance is, therefore, far from being always present, and the anatomical theory of paralytic dementia cannot consequently be based upon this alteration, as it has been by M. Parchappe.

Is it necessary that the softness of the gray substance may be explained in most cases by the congestion which terminated the life of the patient, by the time that elapsed after death, by the temperature, &c.?

It has been perceived that the author assigns the middle portion of the cortical substance, as the seat of the softening. I can not on this point either, agree with him. All physicians who have examined the bodies of the paralytic insane who have died during the first period of the disease, know that in most cases the membranes, on being removed, bring with them only very small portions of the cortical substance. But if it is admitted that the point of separation is that at which the softening is the greatest, it must be confessed

that in the first stages, at least, this is not the middle portion. Often, also, when the portions of the cortical substance which remain attached to the membranes are more extensive, they are so thin and so superficial, that it still is not the middle part that is the most softened. On the other hand, there are cases, far from rare, in which the cortical layer comes off almost entire, leaving the medullary substance bare. M. Parchappe has cited examples of this kind, and I have also seen a considerable number. It is very true that in the greater number of cases, it is only the external layer which separates, but it is only necessary to refer to the structure of the cortical substance to perceive that it could not be otherwise. * * *

Esquirol, as M. Parchappe still does, regarded all cases of ambitious mania as simple insanity, as long as they were uncomplicated with symptoms of paralysis. Bayle, on the contrary, and with him M. Jules Falret, considers many of these cases as presenting a special form of insanity, even before the appearance of paralysis. A case of ambitious mania is reported in the thesis of M. Falret, which was cured after two years duration, without the patient having presented any evidence of paralysis. But, according to the author, this patient was not the less attacked with paralytic insanity, very different from simple insanity, in its etiology, in its progress, and in its symptoms. The diagnosis was based in this case upon the general aspect, and chiefly on the nature of the mental affection, so that the paralytic symptoms, which doubtless would confirm the diagnosis when they did appear, were nevertheless not necessary to establish it. M. Parchappe, on the contrary, maintains in this respect the opinion of Esquirol, that, in order to constitute paralytic insanity, it is necessary that paralysis should be actually present, and until it is present, the case is only one of simple insanity. But this difference between M. Parchappe and M. J. Falret is a circumstance of the greatest importance. Having made this explanation it will be easy for me to state, in a few words, the new opinion which I wish to see adopted. I am firmly persuaded that almost all cases of ambitious mania ought to be separated from simple insanity, but I do not agree with Bayle and M. Jules Falret, that they should be necessa-

rily referred to paralytic dementia, of which they may only constitute the forming stage. They ought, in my opinion, to be referred to a distinct category, under the name of congestive mania. Their relation to paralytic dementia is the same as that of ordinary insanity to simple dementia. * * *

M. Jules Falret.—M. Baillarger has said that there is a wide difference between M. Parchappe and myself. M. Baillarger has stated the question on clinical grounds, and it is thus, doubtless, that it ought to be stated. Among the cases of mania with ideas of grandeur, which M. Baillarger wishes to exclude from general paralysis, it is important to make a distinction; in one class of cases, and these are the most numerous, the embarrassment of speech is present, and M. Parchappe admits them, as I do, into the category of general paralysis; in the other the difficulty of speech does not exist as yet, and this is the only difference between us; but this even is very slight, for M. Parchappe acknowledges with me that general paralysis, if not actually present, is at least imminent.

M. Baillarger.—I persist, nevertheless, in maintaining that between you and M. Parchappe there is a very important difference. The cases which M. Parchappe considers as simple mania, and which you regard as paralytic insanity, are very numerous, and I can cite them from the work of M. Parchappe himself. I grant that he considers ambitious mania as threatening paralysis, and as a precursor of the disease. In this respect M. Parchappe only adopts the general opinion. To deny that patients affected with ambitious mania are much more liable than others to become paralytic, would at this day be to deny what has been clearly proved. It is from the general agreement as to the formidable character of ambitious mania, that I draw my principle argument in favor of separating it from ordinary mania. How is it possible not to perceive that so great a difference in their prognosis and in their termination is sufficient to prove a difference in their nature? It seems to me that authors who continue to confound ambitious and simple mania, while admitting that the ambitious form announces the imminence of paralysis, are very inconsistent.

NOTES OF A VISIT TO LUNATIC ASYLUMS IN GREAT BRITAIN AND IRELAND. By Joseph Workman, M. D.

[*From a Report to the Visiting Commissioners of the Provincial Lunatic Asylum, at Toronto, C. W.*]

I commenced my professional tour by visiting the lunatic asylum of the West Riding, at Wakefield.

This institution was first opened for reception of patients in November, 1818, and from that time to 1st January, 1859, had given admission to 7045 cases of lunacy, of which 2986 resulted in recovery, 633 in relief of condition, and 2456 in death,—leaving 880 remaining in at the latter date, which number has since, by the opening of a contiguous branch asylum, been increased to 950.

The chief asylum consists of two distinct buildings, both of which are complete as to means of classification; but the new erection is much superior to the old in its internal arrangements.

The grounds contain 66 acres, part of which is laid out in plantings, shrubberies, flower-beds, gardens and orchard, and the remainder as a farm, in a high state of cultivation, exclusively by spade labor. Good order, cheerfulness, industry, comfort and kindness appeared to pervade the entire establishment. The medical superintendent, Dr. Cleaton, is a gentleman of superior qualifications, and he seems to have infused his good spirit into the whole institution. The Committee of Visitors have most liberally responded to his large requisitions for pecuniary aid, and have at present in progress several large and expensive works, for the extension and improvement of the establishment, among which I may mention a very large common dining-hall, for 600 patients of both sexes, with a gallery for seating the same at morning and evening prayers; also, a large central kitchen, contiguous to the dining hall, to be furnished with a complete new cooking apparatus, on the most approved plan; and thirdly, a commodious and beautiful chapel, at a short distance

from the asylum, on a suitable site. The contract for this building is over £4000 sterling. The outbuildings comprise gas-works, brewery, bakery, engine-house, farm-houses, shops for various trades, laundry and extensive appendages, and, in sort, every other convenience, which, in England, is considered necessary to form a complete public institution on a magnificent scale. On the occasion of my visit, a ball was given to the patients, in honor of their Canadian friend; and I had the pleasure of seeing 150 of them enjoy themselves in appropriate dances, with such gratification and propriety as could not fail to interest the most fastidious observer, and certainly made me feel quite at home. The evening's amusements were closed by the whole company singing the National Anthem, in such a style and with such enthusiam as only in England could be witnessed.

Everything in this institution excited my admiration, and commanded approval; but everything told me of much to be done at home to bring our institution to the mark of excellence which was here before me. The Wakefield asylum presents the most ample means of classification of the patients,—there are 12 wards for men, and 14 for women. In this advantage, I could readily perceive, lay the explanation of the admirable condition and excellent discipline of the establishment; verifying most decisively the fact, that the chief difficulty of governing a lunatic asylum is not found in the large number of its inmates, but in the absence of their thorough classification.

The diet, clothing, bedding, and all other necessaries and comforts of this asylum are on the most liberal scale. The patients have Sunday dress distinct from their week-day working clothes, and beer is a regular beverage. The working parties are large, and the amount of labor done is considerable. Concerts, balls, pic-nic excursions, and various other indulgences, are freely given, and are found very beneficial. Indeed, I may say that the pauper inmates of the Wakefield asylum are provided for in such a manner as to inspire a stranger visiting it with the very highest opinion of the people at large; for only among a great and good people could such an institution exist.

I must not omit to mention a highly important circumstance con-

nected with this institution, which I also found to obtain in some others. I allude to the system of free and well-regulated social intercourse between the male and female patients. Dr. Cleaton has had extensive opportunity of observation in this and other large asylums; and he feels convinced that much benefit is derived from this social regulation. It is with this view that the capacious dining-hall, above noticed, which will also serve as a concert and ball-room, has been decided on; and that various other arrangements are made to bring the male and female patients frequently together. As a contrary principle has been advocated in America, and has actually been inaugurated in Pennsylvania, it is to be hoped a full trial of the Wakefield system may arrest the progress of theoretic innovation.

A large extent of stone flooring in the Wakefield old asylum has been taken up, and replaced by wood, as more comfortable and less dangerous and troublesome. The old high boundary walls, of prison character, are in progress of removal, and a low wall, surmounted by an iron railing, enclosing enlarged grounds, is to replace it.

Whilst at Wakefield, I took the opportunity of visiting the prison, which is an extensive and admirable institution, containing over 1000 prisoners, 500 of whom are convicts from various parts of the kingdom. The institution consists of two distinct buildings, an old prison, and a new one. The latter is in every way superior to the former. Dr. Milner, the prison-surgeon, gave me much information on those subjects on which I sought it. I have never seen a more clean, or a better-ordered institution, than the new prison. It is said to be one of the best in England.

Ventilation is effected by rarefying towers, with fires in them, above the level of the uppermost cells. Into these shafts the impure air is conducted by converging flues coming from the various apartments beneath. As the prisoners are constantly confined at work in their respective cells, artificial ventilation is indispensable; and the state of the cells of the new prison, compared with that of the cells of the old one, in which the ventilating towers are wanting, sufficiently demonstrated the value of the provision. The dimensions of the cells are about 14 feet long, 7 feet wide, and 9 feet high; giving

over 900 cubic feet to each prisoner; which meets the Government requirement. The mortality is only 14 persons per 1000 annually.

The next public institution which I visited was the asylum at York, for the North and East Ridings, under charge of Dr. Hill.

The building is two stories high, with basement, and is 600 feet in length, with appropriate wings attached. It contains 440 patients; the grounds contain 160 acres of good land, well cultivated, and the gardens and shrubberies are neat and extensive. The patients were more noisy, and appeared less comfortable, than at Wakefield. The matron is the wife of the physician, a regulation expedient in some asylums of the old country, from two circumstances: 1st. The giving of too high a salary to the matron; £150 in this institution, and more in some others. 2nd. Placing in the office, for the sake of the living, women of reduced circumstances, and previous higher position, who are unqualified for the duties, and incapable of learning them. The result has invariably been formidable antagonism and very defective administration. The remedy for these evils has been found in bestowing the matronship on the medical superintendent's wife, who, if she has no family, and is a woman of humble mind, and great energy, may work harmoniously, but hardly subordinately.

Several large associated dormitories are found in this asylum, with 40 beds in each. The great bulk of the patients are incurables. In this institution, and some others, cattle are purchased and fed for slaughter, for the supply of the house, and thus superior meat is obtained at a low price. The gas used here is supplied by the city-works.

I observed one or two cases of sanguineous ear-tumor, in this asylum. I have, for some time, had my own suspicion as to the source of this malady. It has latterly been very unfrequent in the Toronto Asylum. It is rarely, or almost never, met with among females. This circumstance has led me to conjecture that it has some relation to short hair. Some very interesting papers on this affection have been read at the annual meetings of American Superintendents. The writers have regarded it as purely idiopathic, and peculiar to the insane. I am unable to concur in this opinion.

The celebrated *Retreat* at York, an Asylum established and sustained by the amiable sect of Quakers, next claimed attention. It is an admirable institution, and is conducted on the same mild and benevolent system by which it has ever been distinguished. It contains at present 110 patients, many of whom have superior accommodations, and pay from two to three guineas a week. Those who are unable to pay are supported from the over-charges of the rich; and the rule is cheerfully complied with. This asylum well merits the high reputation which it holds. The ventilation appeared to me to be defective, owing, as I thought, to the profusion of trees and shrubberies which closely envelope the house, and prevent free ingress of air and light, an evil too common both in England and America. The nurses in this asylum are paid from ten to fourteen guineas a year, and other servants in proportion. The service of the institution is very efficient, and the discipline is exact. The patients are indulged in various amusements and games, but I heard nothing of dancing; yet no other recreation is better suited to the mental and bodily improvement of the insane.

From York, I returned southward through Sheffield to Derby, where I found a new asylum, constructed on the modern plan of English asylum architecture; and under charge of one of the ablest superintendents in the Kingdom, Dr. Hitchman, formerly of the Hanwell asylum, London. The grounds of the asylum contain 69 acres, presenting perhaps the most beautiful site in all England. I know not any higher terms in which to express my conviction of their loveliness. The buildings, furniture, &c., &c., and the land, have cost £98,396 sterling. The institution was intended to contain 300 patients, but has, as yet, only 270. It may, therefore, be regarded as a very expensive one, but it accords with the present requirements of the English Commissioners in Lunacy. I beg to refer your Board to the "Derby Asylum Report" for 1853, for a view of the ground-plan and elevation, which I herewith lay before you.

Pictures, statuary, flowers, singing birds, pet animals, and various other objects of beauty and interest, are abundantly placed in every ward, and the superintendent's apartments are elegantly furnished.

Heating is effected by hot water, and by fire-grates, and ventilation by rarefying towers; both are expensive, and I fear inefficient. The rarefying towers are heated at the bottom, and not, as in the Wakefield prison, at the top. This is the same error that was committed in the Toronto asylum. The heating by hot water is effected in basement chambers, and not, as in the Toronto asylum, by radiation in the rooms supplied. It is therefore defective and irregular. The garden, shrubberies, and farms, are in the highest cultivation; and the farm-stock is perhaps the best in England. Gas-works, steam-engine, bakery, brewery, and laundry, and every other appurtenance, are of the best construction.

The universal comfort, cleanness, and good order of this asylum, not only commanded my admiration, but astonished me. I felt that in Canada we have a great deal to do before we can flatter ourselves of having approximated to perfection. The Derby asylum has six wards for each sex, with outside, enclosed, and ornamented airing-courts corresponding. There is no crowding, and the means of classification are ample; and besides, there is no shortness of funds with which to accomplish all that is here seen or desired. I very much fear that, in Canada, any Board of Governors establishing and supporting an institution in the style of the Derby Asylum, would be very severely criticised by that class of public benefactors who make capital from their sympathy with our over-taxed people; and yet this is a pauper asylum.

I left this institution and its accomplished superintendent with mingled feelings of regret and esteem, regarding myself as well paid for my voyage and journey, though I should see nothing else in the old world.

From Derby I proceeded to Birmingham, and there inspected the Borough Asylum, contiguous to this fine town.

It falls short, in many respects, of that at Derby, though in structure resembling it. The grounds amount to only 20 acres. The number of patients is 364. It is overcrowded; and the Commissioners in Lunacy refuse permission to enlarge it, unless more land is added to the grounds. The corporation are niggardly, and refuse further out-

lay for land; but the requirement of the Commissioners will be enforced, and most properly; for nothing is of greater value than sufficiency of land for a lunatic asylum. It is to be wished this fact was as well understood in Canada as it is in England.

The borough jail, work-house, and this asylum, are all under the same corporate, fiscal control, and visitorial government; and thus is accounted for the inferior condition of the last-named institution. Lunatic asylum government should not be associated with that of prisons and poor-houses.

I next visited the Warwick asylum. It differs from that of Derby, chiefly in having its wings carried to the front, instead of the rear, and in being less ornamental. An artesian well has been obtained by boring 250 feet. Heating and ventilation, I learned, are defective. In the climate of Canada they would be still more so. The patients had a festive entertainment out of doors, on the day before my visit, and the people of the good old town of Warwick had joined in the sports. These indulgences seem to be well understood in England, where the rich are not too proud to find pleasure in seeing the poor made happy. Some of the patients had danced rather freely, and were languid from the fatigue, and perhaps from indulgences of a more national and substantial character. Dr. Parsey, the superintendent, was very courteous and attentive.

Having thoroughly inspected this asylum, I proceeded to London, where I first visited the asylum of Bethlem Hospital, a very handsome building, with limited but beautiful grounds. This institution contains at present a considerable number of respectable inmates of reduced circumstances, and unfortunately a large number, besides, of a different class, that is to say, criminal lunatics. It is impossible to carry into effect, in such an institution, that benign system of administration which is practicable in asylums of a different order of population. Here are to be found some of the worst characters which the immense city of London can furnish; men whose criminal life has led to insanity; but mixed with these, many whose insanity has prompted to crime; and, occasionally, are presented a few who are worse than either,—impostors, who, to screen them-

selves from just punishment, have simulated insanity. A national criminal asylum will soon be opened to receive the criminal insane of England. Its completion will be a happy era in the history of insanity. It will, no doubt, be conducted on benevolent but judicious principles. The total number of patients in Bethlem is about 340, of whom nearly one-third are criminals. Tobacco is freely allowed in this asylum, and the wards are consequently strongly tainted with its smoke. The servants appear to participate in the privilege. This differs widely from the discipline of the American asylums.

I visited the Hanwell asylum, near London, twice; on both occasions examining minutely the condition of the patients, and the arrangements and discipline of the institution. The chief medical officer, Dr. Begley, has been 22 years in this asylum, and the appearance of every thing about it indicates that his duties are well performed.

Hanwell is the second largest asylum in England, and now contains about 1200 patients. The grounds are extensive, and are much ornamented by shrubberies and flowers. The buildings are large, and complete in their arrangements, affording abundant means of classification. Dr. Begley very kindly caused the clerk of works to draw for me a ground plan of the buildings, which I submit to your inspection. In this asylum, as in all those of Europe, in the vicinity of large towns, the number of cases of that peculiar form of insanity designated "general paralysis," characterized by impairment of muscular power, and ultimately by its total extinction, and by mental delusions of an exalted and very distinct order, is very considerable. It is there, as on this continent, almost exclusively confined to males; but in America it is comparatively rare in either sex. I have never seen a case in a female in the American asylums. In the large asylums of London, Wakefield, Lancaster and Dublin, in which its victims form separate groups, in distinct apartments, their inspection is, to the professional visitor, a painful task. He knows that they are beyond the reach of remedial agents. Not unfrequently it lays hold of men of distinguished

energy, and eminent position. In Scotland, the asylum physicians seem to regard it as largely ascribable to intemperance. The experience of this country leans rather to an opposite conclusion, as the majority of its victims here have been men of temperate habits. Its almost restricted incidence to the male sex, might suggest some relation between the malady and sexual propensity; but it might be both unjust and dangerous to venture further than conjecture. The general comfort and tranquillity of the patients of Hanwell are very pleasing to visitors. It has constantly been remarked by American superintendents, in their tours of inspection, that the inmates of European asylums are much more tractable, quiet and orderly, than those of American asylums. This statement is quite correct as to the English asylums, but not as to those of Ireland or Scotland. In the latter two countries I found the patients as noisy, restless, and mischievous, as those of American asylums. The people of England, as well as the inmates of their lunatic asylums, use a generous diet, and free beverages of ale; and there is some constitutional affinity between good feeding and mental composure. Be the fact as it may, there is more scolding in the Scotch, and more restlessness and mischief in the Irish asylums, tenfold, than in those of England.

The largest lunatic asylum in England, is that of Colney Hatch, six miles north of London. It now lodges about 2000 patients, of whom 800 are men, and 1200 women. The grounds contain about 140 acres, and the main building has a front extension one-third of a mile, with numerous wings projecting from the rear. The height, including basement, which is not excavated, is three stories. The establishment is complete in every requisite, and has cost £500,000 sterling. My attention was given chiefly to the female division, as the medical officer of the male side was absent. The females are divided into 21 classes. The result of this extended classification is, that good order and general comfort prevail; and the task of supervision is by no means so difficult as those who have never visited such an institution might suppose. A few distinct divisions in any lunatic asylum, are found adequate to relieve the great majority from annoyance and disquietude; whilst in an asylum with ever so small

a number of inmates, where the noisy, violent, obscene, filthy and idiotic are, from lack of distinct accommodation, mixed with other classes, there can be neither peace, comfort, nor safety. In this asylum, as in every other in England, great importance is attached to the ornamenting of the grounds, and the interior of the house; and every possible means of employing and amusing the patients is had recourse to. I do not think it is advisable to found lunatic asylums on a large scale; but the authorities of this institution have avoided the far more serious error of leaving it incomplete. Had they erected no more than its large front wards, it would now be in a sad condition, and would be pointed to as a proof of the impropriety of large foundations for the insane.

Having satisfied myself with the inspection of the leading insane institutions of the metropolis, I set out for a further examination of the provincial ones; and on the 7th of July, visited that of Shrewsbury, Shropshire. This asylum has only 30 acres of land; but the site is very beautiful, and the soil is good. The farm is well tilled by spade labor. There were 349 patients in the institution when I visited it. An additional detached building has recently been opened for patients, but the original building was complete prior to this erection. The asylum is an excellent institution; but nothing connected with it is more attractive than its medical chief, Dr. Oliver, whose whole deportment and conversation, both among his patients and in the domestic and social circles, evinced goodness of heart and clearness of intellect.

Dr. Oliver has, for some years, pursued a heroic line of treatment in certain forms of acute insanity, in which his medical confreres tremble to follow him. I refer to his profuse exhibition of opium, which he informed me he administers not only with impunity, but with signal benefit, to the extent of 20 or 25 grains, twice in the 24 hours. It certainly would be unadvisable for an asylum physician in this country, where the medical profession is not altogether composed of gentlemen, nor of extensive readers, to venture on such bold practise; more especially, too, as coroners' inquests are now objects of keen competition.

The next asylum visited by me was that of Chester, which is an old foundation, and consequently a defective one. Important improvements and extensions are now in progress, which will raise the capacity of the institution from 200 to 500 patients. In this asylum were, until recently, to be found almost all the structural faults of the former age; as strong, narrow cells, ponderous doors, iron bars and gratings, high, prison walls, stone floors, and numerous other precautionary provisions against real or imaginary dangers. The work of removal and transformation has gone on slowly, and by piece-meal, like other salutary reforms; but even now a few vestiges of the olden times remain to demonstrate the value of magisterial conservatism. The medical superintendent has not totally succeeded in introducing as orthodox truths in Chester, facts which have been ratified by the experience of nearly all the world outside.

Until lately this asylum had only eleven acres of land; an addition of 44 acres has now given it a very good farm. Faulty buildings test the capacity of a superintendent; and Dr. Brushfield has shown how much can be accomplished, under even the greatest disadvantages; yet his hardest work has not been in the management of his patients, but in the slow conversion of his superiors. But however reluctant these have been in improving the asylum, they have shown great consideration for their superintendent; for they have erected for him a very handsome and capacious residence, separate from the asylum.

Having inspected the Chester asylum, I proceeded, on 8th July, by Holyhead to Dublin; and as I had been informed in England that I would find a very good asylum at Killarney, I went at once to this famous place. I found the institution superior to my expectations. Certainly had I not seen it, I could never have believed that contiguous to such a den of filth, laziness, and unaspiring poverty, as the old town of Killarney presented to my organs of sight and smell, so pretty, clean, and comfortable an insane asylum could be established or continued. The building has been erected under the instructions of the Irish Board of Works, and it does infinite credit to the judgment and good taste of this body. It is fortunate

for the poor of Ireland, that a central authority like this exists, to control erections of public utility; for, from all I could gather of the views and wishes of the resident gentry and proprietors, it would be many centuries yet before their conceptions of the wants of the insane poor would carry them to the establishment of so good an institution as the Killarney asylum. It has cost only £40,000 sterling, and has 222 beds, of which about four-fifths are occupied. The annual expense for 1856 was under £3500 sterling, yet the gentry complain of the institution as extravagant. It will be an arduous and very thankless task to keep this institution up within a decent distance of the present status of asylums elsewhere.

The Killarney asylum is doing more good than in the mere care and cure of the insane inmates. It is a model school of neatness and good order for the instruction of the people. I inquired of Dr. Lawlor, the superintendent, whence he obtained his servants. I could not think they could be drawn from the contiguous population; but he told me they were, and that he had trained them all. I thought his office must be no sinecure. He also told me that his patients, when recovered, all went out greatly improved in habits, and proved more useful than they ever had been before their insanity. Dr. Lawlor is doing a great and useful work, in this demonstration of the capability for improvement of a most unpromising class of people, and the Irish government deserves high commendation for the establishment of this institution, and various others of similar merit. The sleeping rooms of the Killarney asylum are placed on one side only of the corridor, so that abundant light and free ventilation are commanded.

The site is one of the best which this picturesque country presents, and every part of the building has been constructed with scrupulous regard to neatness, comfort, and convenience. I found infinitely more pleasure in the inspection of this institution than in the boasted beauty of the adjacent lakes and mountains of Killarney.

On Monday, 10th July, I returned to Dublin, to inspect the celebrated Richmond asylum. This institution, like that of Wakefield, consists of two distinct buildings, an old and a new one. I wish I

could say that in other respects it resembled its English sister. The grounds, being within the city, are very limited, and the buildings are both over-crowded. The total number of patients is 650. The medical superintendent appears to occupy a very indefinite position. He has no resident assistant; but several salaried officers, designated visiting physicians, attend daily, and record their visits. Of course they also append their signatures to the quarterly pay-lists;—and here, perhaps, it would be as well their function ceased; for neither in this asylum, nor any other in which similar appointments exist, could I discover any advantage in the regulation, but very much to the contrary. The treatment of the insane must be conducted, and can be efficiently conducted, only by medical officers constantly residing amongst them; and every interference by other parties, whether with the patients or with the servants, must prove pernicious. In the best-managed asylums of the old country, where these visiting physicians still continue to be appointed, their duties are, practically, a nullity; in those in which they exceed this, the function of the superintendent approximates to nullity, and the institutions suffer accordingly. The Richmond asylum will most probably remain as it is for a long time to come. It is too near the Liffey, and too far from the Thames.

On the 13th July, I left Dublin for Belfast; and here I found an insane asylum which may compare advantageously, except in its diet-tables, with the best in England. Dr. Stewart is the very life and spirit of his institution. He seems to live for nothing else; and every thing in and around his establishment bears the impress of his energy and good taste. His services are duly appreciated by the Board of Governors, and the intelligent community of Antrim and Down. The number of patients now in the asylum is 360. The want of increased accommodation is much felt, and great hardship is suffered by the excluded insane and their families.

The next asylum visited by me was that of Armagh. This, I trust, is not only the worst in Ireland, but in all the world. It contains only about 150 patients, yet it is the sole insane asylum for the three populous counties of Armagh, Tyrone, and Monaghan. The

arm of paternal despotism is wanted here; and it is to be hoped that the Irish Board of Works will, ere long, do for these counties what it has done for Kerry. Nothing short of arbitrary central power will be adequate. The landed proprietary, who compose the grand juries, set their faces against local imposts. The claims of humanity are but as dust in the balance, against the cravings of landlords. The Armagh asylum is crammed. There is not a water-closet in the building, and doorless privies in the walls of its prison airing-courts require no sign-board to indicate their location. When it is requisite to clean out these receptacles, the offensive matter has actually to be carried through the asylum. Water, it may be said, there is none, though the city main passes close to the premises. The foul air of the rotten, dungeon-basement, is felt throughout the house. The quantity of land is eight acres. This is in Christian Ulster.

Having spent a short time among the few remaining friends and companions of my boyhood, I left my native land for Scotland, where I wished to inspect the asylums of Glasgow, Edinburgh, and Dumfries. I found much to admire in each of these institutions, and observed a few things requiring improvement. Each, like those of Wakefield and Dublin, consists of two distinct buildings, an old and a new. The old buildings are instructive, as showing the faults and defects of the past, and the new, as exhibiting, in contrast, the improvements of the present time.

The site of the Glasgow asylum, at Gartnavel, is truly beautiful, and the arrangements and discipline of the institution are generally excellent. Here the new building is appropriated to the higher order of patients, many of whom pay high rates of board. In Edinburgh and Dumfries the new buildings have been appropriated to the poor patients. The insane in the Scotch asylums are treated in the same gentle and kind manner as those in England; but there is a very marked difference in their demeanor; they are clamorous and discontented, and some of them abuse the Superintendent and his assistants severely and loudly. Their scolding is all borne with exemplary patience, and probably they are benefited by these occasional bursts of pent-up eloquence.

The total number of patients in the Glasgow asylum is 520. The means of classification are ample, and consequently the general comfort of the inmates is very satisfactory. Dr. McIntosh speaks to his patients in the most mild and conciliatory manner, and appears to study very carefully their peculiar mental tendencies and caprices.

In the Edinburgh and Dumfries asylums I found little different from what I observed at Glasgow. In all three the number of cases of general paralysis was painfully large. The medical officers seemed disposed to charge the evil to intemperance.

The profuse use of tobacco and snuff, in Scotland, might perhaps justly come in for a share of the accusation. I was surprised to observe the extent to which this costly drug is consumed in that country of common sense. Dr. McIntosh informed me that in his institution hereditary insanity is strikingly common. The grounds of the Glasgow asylum are 70 acres; those of Edinburgh, 67; and those of Dumfries probably about as much.

The new asylums at Edinburgh and Dumfries stand a short distance from the old ones, from which they are screened by handsome intervening shrubberies. Besides the usual number of wards in the Edinburgh new building, two appended buildings, of one story, are placed a short distance from the ends, for the lodgment of noisy and other troublesome patients. These apartments are of great value to the institution. Ventilation is imperfect in the Edinburgh and Dumfries asylums.

The last asylum visited by me was that of Lancaster, which is one of three establishments supported by the county of Lancashire, containing an aggregate of over 1600 patients, of which the Lancaster asylum has 724. I was prepared, by previous information, to find this institution one of high merit; yet it surpassed my expectations. The quantity of land is only 57 acres. The grounds are laid out with true English taste, and are kept scrupulously neat. The building was originally of the H form, but by various additions has now lost its early aspect; yet all the arrangements are judicious. The laundry, and drying and ironing rooms are very extensive. The washing is done by hand, and gives employment to a large number of female

patients. The kitchens are large, and very complete in apparatus. Every part of this establishment, and everything within and without, is as clean as a new pin. It is a perfect model of English neatness, English comfort, and English industry.

A large, two-story, stone building, detached from the chief building, has been recently erected at a cost of only £1500, for the residence of 50 male patients, of various trades. The work-shops are in the first story, and the eating and sleeping-rooms in the second. When in the shoemaker's shop, I enquired whether any casualty had ever occurred there, from the presence of dangerous implements, and was informed that one patient had injured another by a blow with a shoe-hammer; it was then pointed out to me that all the hammers were now chained to the seats, "by order of the Governors." I enquired, "What of the knives?" but was answered that no patient had yet hurt any one with a knife. Thus we provide against an evil which has occurred; yet are fearless of much greater, because it has not yet happened.

Dr. Broadhurst stated that among the patients of this asylum general paralysis is very common; and that the same fact obtains in the other asylums of Lancashire. He informed me that, in the few instances in which the disease had presented itself in females, it was not accompanied by the peculiar mental delusions of ambitious monomania, which almost invariably manifest themselves in male cases. I should regard this fact as a proof of the non-identity of the male and female maladies. The floors and doors of this asylum are all of British and American oak, and are as perfect as when made. The stairs are of stone, and are already so much worn as to require replacement.

Whilst waiting for the departure of the steamer at Liverpool, I availed myself of the kindness of Dr. Archer, surgeon to the Liverpool Burrough prison, to inspect this institution. The establishment had, when I visited it, about 1000 prisoners, the majority of whom were convicts. It has sometimes had nearly 1200 prisoners. It is about double the size of the Wakefield new prison; but its arrangements and discipline are on the same principles. The ventilation is

on the same plan as in Wakefield; but in the summer the tower-fires are not kept going as in Wakefield. The difference of the air in the two buildings was to me very perceptible, and proved that the system is efficient, but must not be intermitted.

Insanity occurs in this prison annually to the extent of about 20 cases. Dr. Archer appears, from his reports, to regard the malady as frequently arising from solitary confinement. In such cases association has been found a successful remedy.

OBSERVATIONS UPON PUERPERAL INSANITY.

By Richard Gundry, M. D., Assistant Physician to the Southern Ohio Lunatic Asylum.

I propose, in the following pages, to notice some of the characteristic features of puerperal insanity, or that mental unsoundness which attacks women during the continuance of those physical changes induced by the occurrence of gestation, and extending over a long space of time, from conception to a few weeks after the close of lactation. This period embraces three very distinct epochs, in which the disease may commence, and which, also, to some extent modify the forms assumed by the mental disorder:—

1. The period of gestation; including both conception and delivery.

2. The period extending about two months from delivery, during which the involution of the uterus is completed, and the function of lactation is thoroughly established.

3. The period of lactation, including weaning and the changes induced by the decline and cessation of the lacteal secretion.

Surely no affliction appeals more strongly to our sympathies than this fearful disease, which, when a household rejoices at the happy issue of its matron from the "hour of Nature's need," turns its joy into mourning by the approach of a far greater evil than that just vanished—where the fulfillment of the maternal function, woman's

crowning joy and glory, forms the alembic in which is distilled her most bitter cup of sorrow. Surely, then, such a disease deserves our close and diligent observation of everything which denotes its approach, or marks its progress. Nor is the extent of the calamity so slight as to avoid attention. In an analysis of the causes of insanity in 11,762 insane women, reported from fourteen hospitals for the insane in the United States, 1050 are noted as occurring during the puerperal period; or nearly 1 in 11 insane females. The reports of foreign hospitals for the insane would doubtless tell the same story. During five years one-eighth of the females admited into Bethlem (London,) were subjects of puerperal insanity. At Salpêtrière a twelfth, and during some years a tenth were of the same nature. The experience of these two metropolitan hospitals is thought by Dr. Tuke to be above other institutions. He estimates that in most English asylums one-fourteenth to one-twentieth of the females admitted is the proper proportion. The results of a careful examination of the cases given above do not enable me to concur with this opinion, but exactly agree with the deductions from the experience of Bethlem and Salpêtrière, and it may be questioned whether they represent fully the proportion chargeable to this cause. Esquirol met in private practice with a still greater relative number of cases, and this has been the experience of several eminent practitioners who have had abundant opportuities for observation. From various sources we derive the following statistics on this subject.

	Number of Insane Females.	Puerperal Cases.
14 American Asylums,	11762	1050
Reported by Dr. McDonald,	691	49
" " M. Parchappe,	596	33
" " M. Seller,	97	11
" " Hanwell Asylum,	703	79
" " M. Mittivie,	242	9
" " M. Esquirol,	1119	92
" " Bethlem Hospital,	899	111
Totals,	16109	1434

According to which table, of every 100 insane women, nearly 9

became so in consequence of the puerperal condition in some of its stages. On the other hand, the records of lying-in hospitals show that a very small proportion of the whole number of women *confined* become insane. In the Westminster Lying-in Hospital, according to Dr. Reed, only 9 out of 3500 delivered there were attacked. In Queen Charlotte's Lying-in Hospital, in 2000 cases there were eleven who became insane. Other institutions of a similar nature furnish like results. It must be recollected, however, that the time spent in a lying-in hospital after delivery is usually very short, and does not include the period of lactation most productive of mental disease.

I shall endeavor to trace the principal points in the history of *fifty-six cases*, and compare the results thus arrived at, with the opinions and experience of other observers.

The age at which insanity first appeared in these cases, was as follows:—

	Cases.	Ratio.
Under 20 years of age,	3	5.36
" 25 " " "	18	32.14
" 30 " " "	11	19.64
" 35 " " "	13	23.21
" 40 " " "	8	14.29
" 45 " " "	3	5.36
Totals,	56	100.—

It will be seen that from 20 to 25, and from 30 to 35, the proportion is much larger than at any other period; but this might have been expected, so far as the first period is concerned; for the proportion of females living at that age in the United States greatly exceeds that of any other period, excepting less than 20 years of age. So far as any conclusion can be drawn from such limited data, it points to the period of life between 30 and 35, as the time most prolific of puerperal insanity. Many of the cases in our survey did not come under observation during the first attack. We must therefore inquire the age at which the attack (herein alluded to) was developed:—

Between 20 and 25 in 9 cases.	Between 40 and 45 in 3 cases.
" 25 " 30 " 15 "	" 45 " 50 " 2 "
" 30 " 35 " 16 "	
" 35 " 40 " 11 "	Total, 56

And in this connection we must also take into account the number of attacks suffered. Thus, it was—

The 1st attack in 37 cases.	The 4th attack in 4 cases.
" 2nd " " 10 "	No. unknown, " 1 "
" 3rd " " 4 "	
	Total,.....56

We shall more fully understand the influence of age by ascertaining the periods at which each of these attacks occurred :—

Periods.	Cases of one Attack.	Of two attacks.		Of three attacks.			Of four attacks.				Total No. Attacks.
		1st	2nd	1st	2nd	3rd	1st	2nd	3rd	4th	
Less than 20 years,	0	2		1							3
" " 25 "	6	6	2	2	2	1	3	3			25
" " 30 "	9		2	1	1	1	1		3	3	21
" " 35 "	11	2	2		1	1		1	1	1	20
" " 40 "	8		3								11
" " 45 "	3										3
" " 50 "			1			1					2
Totals,.....	37	10	10	4	4	4	4	4	4	4	85

The history of the 55 persons, therefore, embraces 85 different attacks of insanity, of which more than one-half occurred between 25 and 30 years of age; while taking those only who had one attack, the period from 30 to 40 furnishes more than one-half. Whether the inference to be drawn from this, that those attacked more early are more liable to a recurrence of the disease, is warranted by the other circumstances of the cases, will afterwards be adverted to. One case of the 56 not included in the above analysis had suffered from several attacks, (the exact number not being known to me,) of which the first took place before 25 years, and the last at 32 years of age; from all of which she perfectly recovered.

The influence of occupation receives but feeble illustration from this series of cases. All classes seem equally liable. Neither riches, with the luxury that attends, nor poverty, with its supposed exemption from enervation, can claim any exemption.

As to their civil condition very little can be said. 54 patients

were married, and 2 single women. Esquirol remarked that the number of single persons becoming mothers, who are afflicted with puerperal insanity, bears a large proportion to the married. Of 92 cases reported by him, 63 were married and 29 single. We might expect, *a priori*, that if moral causes exerted so preponderating an influence in the production of insanity as many writers assert, a larger number of those unfortunate women who have borne illegitimate offspring would be found subjects of this disease, than the statistics of insanity in any country exhibit.

From the indirect agencies in the etiology of puerperal insanity, we naturally pass to the consideration of a more direct and causative influence. How far does hereditary tendency display itself in cases of this description? This is a difficult question to answer correctly, for no point is more assiduously concealed by the friends of parties than the existence of any hereditary taint. Where collateral relatives have been insane, I have included them in my estimate, as leading to the surmise of a taint in the common ancestry, in the absence of precise information; though such evidence is by no means conclusive:—

Father had been insane	in	3 cases.
Mother " " "	"	6 "
Father, brother, and 6 sisters	"	1 "
Mother, and mother's sister	"	1 "
Great-grandfather, (Father's,) and sister	"	2 "
Brothers or sisters	"	4 "
Father's brother	"	1 "
Uncle, and aunt	"	1 "
Hereditary (relationship not specified)	"	3 "
Not ascertained	"	34 "
Total		56

Twenty-two out of fifty-six, or two in every five, are suspected or known to have been predisposed to mental disorders by the existence of hereditary taint. This corresponds with the proportion observed by Esquirol, while Dr. Burrows found, in 80 women who became insane after delivery, more than half hereditarily predisposed. Dr. Gooch remarks: "A very large proportion occurred in patients in whose families disordered minds had already appeared;" and in 217

cases collected by Helfft, Weill, and Marcè, 89, or 41 per cent., belonged to this class.

Any unusual circumstances affecting the patient about the time of the attack must be taken into consideration, as exercising more or less influence in its causation. Of such several have been ascertained in this series of cases. These can be arranged as follows:—

Lost a child prior to last delivery,	3	Chorea,	1
Miserably situated at confinement,	2	Abscess of breasts,	1
Drunken or worthless husband,	5	Illegitimacy of child,	3
Inflammation of uterus,	3	Repelled papular eruption,	1
Leucorrhœa,	1	" ulcer,	1
Still-born child,	1	Mental emotion,	1
Family difficulties,	2	No unusual circumstances,	26
Child ruptured, (grief),	1	Not ascertained,	4
		Total,	56

Of those marked as having no unusual circumstances, it is simply intended to show that the circumstances surrounding them at confinement in nowise differed from what they were daily accustomed to; that their comfort was provided for, and that no trouble, no sad affliction had previously depressed their feelings, or occurred at the time to exercise an injurious influence upon their prospects. The exact value to be attached to any of these agents in the etiology of puerperal insanity is not easily estimated. They rather concur with the existing puerperal condition in precipitating an attack than in originating it. At any rate, they materially increase the difficulties to be surmounted before health is attained, by those with proclivities to mental disturbance. Where a combination of circumstances exists in a given case, it is no easy problem to determine what exerts the chief influence, and it is by no means clear to my mind whether these circumstances should be regarded as predisposing or as exciting causes.

Here it will be proper to notice the influence exerted by the previous labor, when several important questions arise. Are primiparæ more liable to become affected than multiparæ? and the circumstances of the labor, its dangers and complications, what do they perform in this work? Among 53 persons, (3 being unknown,) it was observed there were attacked in connection with the—

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1st labor,	10	3rd and 4th labors,	1
1st, 2nd, and 3rd labors,	3	4th "	6
1st and 3rd "	1	5th "	3
1st, 2nd, 3rd and 4th "	3	5th, 6th, 7th, and 8th labors,	1
2nd "	8	7th "	2
2nd and 3rd "	1	After every labor, (No. unknown,).	1
3rd "	9	After having borne several children,	4

Only 18, or 1 in 2.94 of the number were primiparæ; while of these 7 had a repetition of the attack in connection with every child born to them. When insanity has once established itself as one of the incidents of the puerperal condition, it seems to have a great tendency to appear at every successive period of that kind. This periodicity was noticed in 10 women, and was established in the 1st, the 2nd, the 3rd, and even the 5th puerperal state. In only one case did it skip over one child after it had once appeared, and then re-appeared with the next. M. Marcè found in 57 patients only 14 primiparæ; and amongst the 43 remaining cases, 13 had been confined 5, 6, and even 9 times.

How far the nature and history of the labor influenced the production of insanity which may have ensued, is open to much discussion. Difficult and tedious labors seem as innoxious as regular and easy labors. Nor are those who have flooded profusely more certainly liable to an attack than any others. Drs. Merriman, Gooch, Esquirol, Frias, Selade, Billod, and Reid, mention one instance each of insanity in connection with labor, complicated with puerperal convulsions, and apparently dependent on that cause. Yet the proportion of patients with eclampsia becoming deranged is exceedingly small; too trifling to furnish evidence of any relation existing between them, as cause and effect. Dr. Webster has charged upon the use of chloroform in labor some few cases of puerperal insanity, and Dr. Skae, of the Edinburgh Asylum, reports one case attributed to this, the only one out of 44 cases of puerperal insanity admitted into that institution since the discovery of chloroform. On the other hand, Dr. Simpson relates two cases where the use of chloroform in labor prevented the expected usual attack of mania after it.

The history of the invasion of the disease is less perfect than I could desire. Except in a few cases it has not been my fortune to

observe the actual inception of the disease. The facts relative to the first symptoms are gained from the certificates of the examining (not always the attending) physician in the case, or from the relation of friends where opportunities occurred. The utmost care in sifting out the various details may not have prevented many errors from creeping in. At what period is insanity most likely to attack the puerperal woman?

Period of Attack.	1st Epoch.	2nd Epoch	3rd Epoch.
During pregnancy,	7		
Less than 15 days after delivery,		20	
" " 1 month " "		5	
" " 2 months " "		4	
" " 3 " " "			2
" " 4 " " "			6
" " 6 " " "			4
" " 12 " " "			2
Immediately after weaning, (about 12 months after delivery,)			2
Unknown, but during lactation,			4
Totals,	7	29	20

To complete the history of this stage of the disease, it may be necessary to ascertain at what period the previous attacks already alluded to occurred. Four attacks were non-puerperal; four attacks were during pregnancy; fourteen attacks were during the second epoch; two attacks were during lactation; and the circumstances of *six** attacks are unknown. So that of 76 known puerperal attacks, 11 began during pregnancy; 43 during the two months following delivery; 22 during lactation, or immediately after weaning.

Compare with these the results of others. Esquirol thus classifies 92 cases:—

From first to fourth day after delivery,	in 16 cases.
" fifth " fifteenth " "	" 21 "
" sixteenth to sixtieth " "	" 17 "
" sixtieth to twelfth month of suckling,	" 19 "
After forced or voluntary weaning,	" 19 "

*These *six* attacks, marked as unknown, occurred either during the second or third epoch, in which is unknown.

1st labor,	10	3rd and 4th labors,	1
1st, 2nd, and 3rd labors,	3	4th "	6
1st and 3rd "	1	5th "	3
1st, 2nd, 3rd and 4th "	3	5th, 6th, 7th, and 8th labors,	1
2nd "	8	7th "	2
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After forced or voluntary weaning, ... " 19 "

*These *six* attacks, marked as unknown, occurred either during the second or third epoch, in which is unknown.

A summary of the cases reported by Dr. McDonald, Dr. Burrows, M. Marcè, and at Hanwell, in 1848, and those collected by M. Marcè, and by Dr. Wyman, of Boston, in Report of 1834, may also be useful for comparison :—

Period of Attack.	Dr. McD.	Dr. B.	M. M.	At H.	M. M.	Dr. W.	Total.
During Pregnancy,	4		18	4	27	5	58
After Delivery,	44	51	41	26	180	28	370
During Lactation,	18	6	20	13	103	47	207
Total,	66	57	79	43	310	80	635

The second is, therefore, the most important in the causation of disease. Some have regarded that as embracing only six weeks after delivery instead of two months, the limit I have adopted ; so that were the figures corrected to that period, the numbers of the second epoch would be still slightly increased.

The access of the disease was marked by symptoms in this series which were, in many instances, doubtless but imperfectly recorded. Often the alterations of manner, of feeling, the emotional and instinctive changes which ushered in the attack, were either unobserved, or their value unappreciated. Something startling, out of the usual routine of life, must occur to be remembered as the starting point in the history of mental disease in such cases. I have estimated the first symptoms as closely as possible, in the following table :—

Nature of the First Symptoms.	No. Cases.	Nature of the First Symptoms.	No. Cases.
Unfounded jealousy and suspicion,	4	Quarrelsome propensity,	1
Fear of injury from persons,	3	Attempt to kill child,	3
Attempts to wander away,	5	Suicidal attempt,	4
Indifference to child,	3	Suicidal and homicidal attempt on children,	1
Excited talk,	9	First symptoms not ascertained,	8
Delusions,	7		
Hallucinations,	4	Total,	56
Fear of impending evil,	3		
Ecstatic feeling	1		

The period of incubation in puerperal insanity varies. It is in a majority of cases gradual and progressive. It may be sudden and decisive. In the second epoch the latter is more frequently the case than at either of the other periods; yet it can not be said to characterize a large proportion of those cases. Often it happens that, long before any attack is apprehended, the patient is exceedingly influenced by overwrought emotions. Easily moved by trivial circumstances, she weeps or laughs immoderately compared with the cause. Usually there is sadness, a tendency to look at the dark side of every thing, to fear evil in the future, and not unfrequently a presentiment more or less transient that her mind will give way. All these phenomena are only recalled to memory long after the disease has unequivocally appeared, and seldom warn the friends of its approach. The first symptom is often seen in the peculiar appearance of the eye; easily recognized when once it has been seen, but exceedingly difficult to be learned from description. Restlessness, a wish to be moving from place to place, indifference or dislike to those around her, increasing loss of sleep, a quick but very compressible pulse, a creamy-coated tongue, actions and expressions perhaps not remarkable in themselves, but strangely out of unison with the character or circumstances of the individual, appear in many instances in the early stage of the disease. To these frequently succeed slight febrile excitement, irritability of temper acquiring fresh strength at every display, suspicion of motives, and a capriciousness of inclination, or temper or desire. Little by little, almost imperceptibly these may increase, until their combined and accumulated force precipitates an explosion, which leaves no room for doubt as to her condition in the minds of her friends. Now appear strange and wondrous delusions; and expressions so vulgar and obscene mingle in the conversation of delicate and refined women, that Pope's sarcastic line seems reasonable enough. It may be doubted whether certain actions noticed as the first symptoms of this series of cases were really such, yet they indicate tolerably well the nature of the disturbance (of the emotions or the instincts generally) which ushers in an attack. In eleven cases the natural affection for those who in health

were nearest and dearest to them, degenerated into indifference and suspicion, or became perverted to hatred and a desire to injure. Unfounded dislike to the nurse, or those in attendance upon the patient, was pointed out by Gooch as usually the first sign of derangement in women recently delivered. The delusions noticed in seven cases referred to various subjects, and were generally of a depressing character. In several of these the idea of being utterly lost, or having committed the unpardonable sin, was prominent. These were probably cherished long before they were avowed, and gradually acquired strength as they lingered in the mind.

The growth of the disease is not always thus gradual. The premonitory symptoms may have been absent, or have differed so little from the ordinary course of action as to have excited no attention. The explosion is the first intimation of danger at hand. An attempt at suicide or homicide may first alarm the friends. One patient, after three sleepless nights charged to some trivial cause and disregarded, showed the force of the disease by throwing her child down a vault. Another wanders from her childbed one evening, appears in her night-clothes at a religious meeting in the neighborhood, and smiling, asks, in a whining voice, "Are you all well?" yet none had previously suspected her to be insane. One, a few weeks after confinement, witnessed an altercation between her husband and another person regarding the loss of some money, fell fainting on the floor, and when restored to consciousness was found to be deranged, and would afterwards laugh and dance as merrily as a mountebank. The further progress of the cases may vary; those who evinced a suicidal tendency at first may become maniacal, or glide into gloomy melancholy. The latter is the more frequent course. The reverse is the usual history of those with homicidal propensities. Delusional symptoms are confined to no form, but may tincture them all in one way or another. To this point I shall advert hereafter.

I have already stated that the form of insanity assumed by the patient is to some extent influenced by the epoch in which the attack began. This may be seen, so far as the 56 cases are concerned, in the following table :—

Form of Mental Disease.	1st Epoch.	2nd Epoch.	3rd Epoch.	Totals.
Mania,	5	22	9	36
" periodical,		1		1
Melancholia,	2	5	7	14
Dementia (primary,)		1		1
Monomania of fear,			2	2
" " unseen agency,			1	1
" " suspicion,			1	1
Totals,	7	29	20	56

Mania is the most frequent form, and especially predominates in the cases occurring soon after delivery. In those during lactation melancholia, and those partial forms (more allied to melancholia than to mania) more nearly balance the number in which mania occurred. The experience of M. Marcè accords in assigning the highest number of cases to mania. All other authorities coincide. There is, however, a class of cases which rarely has any examples in any hospital for the insane, wherein mental disturbance (of the type of delirium rather than mania) supervenes a few days after delivery, and very rapidly terminates, either by recovery (as in the large majority) or in death. The proportion of such is difficult to be arrived at.

We have now arrived at the consideration of the symptoms which marked the progress of the cases, and as far as possible we shall classify them, both with regard to the form of the disease with which they were associated, and the period of its origin. They naturally arrange themselves into two classes; namely, mental or psychical, and physical. A very short examination of them in this order must suffice.

No man who passes into the company of insane women, unacquainted with their history, can pick out those laboring under puerperal insanity in any of its forms. This is particularly true where puerperal melancholia or monomania occurs. Of mania, a few symptoms deserve special notice. In some comparatively few cases of mania (more frequently during the second epoch, originating within ten days of delivery) the stage of excitement runs exceed-

ingly high. There may be very violent and irregular muscular exertion, great febrile excitement, intense heat of occiput and sinciput, with a very quick, sharp, but compressible pulse, running from 110 to 120. The heart's action is correspondingly tumultuous, but somewhat labored. The tongue at first is creamy, then, becoming more dry, is brownish, and finally with the teeth coated with dark sordes. Where improvement takes place, the tongue becomes red in the middle, sometimes dry, but gradually gets to be more moist and cleanly. The elevated papillæ are conspicuous for some time. As the disease advances, a peculiar and heavy sweat exudes from the whole surface of the body; the breath becomes very offensive, even fetid; involuntary discharges, both fecal and renal, ensue; vigilance is generally, but not always present. I have seen sleep (apparently good sleep) leave the patient not only unimproved, but apparently worse in every respect, and when this occurs the prognosis is very unfavorable. In these cases the mental characteristics consist of constant hallucinations or illusions, which keep her constantly exhausting herself by increasing talk and action. There is a constant attempt to tear off her clothes, and to be naked. Usually she refuses food, apparently loathes it, and while incessantly calling for water to drink, constantly spits it out as soon as it enters the mouth. An inveterate propensity to spit is usually a well-marked symptom of this form of disease. This series of symptoms is exceedingly rapid in progress; a few days decide the issue, when death closes the scene, or the patient passes into the more usual path of mania, and ultimately recovers. Of four such cases embraced in the series under consideration, three commenced on the fourth and ninth days respectively, during the continuance of the lochia, which flowed abundantly. Of these one died; the other two subsided into the usual form of mania, and recovered. The other case occurred in a feeble, anemic woman, who had just weaned her child, twelve or thirteen months old. She gradually became calmer, her illusions still continuing, and ultimately recovered after two months illness. The symptoms bear a striking resemblance to the "irritative fever" which accompanies large suppurating sur-

faces, or from poisoned wounds. With an apparent increase of vital action, the real cachectic nature of the disease is but slightly masked. Yet slight as this mask actually is, it often deceives the practitioner, on his first acquaintance with the disease, into a belief of its sthenic and hyperæmic origin; than which nothing can be more erroneous pathologically, or more calculated to lead to a wrong and even dangerous course of treatment. A very brief sketch of such a case is subjoined, as an example.

M. M., born in Germany, aged 25, married; of tall and spare form, black hair, gray eyes; was for first time delivered, after a difficult and tedious labor, of a still-born child. She constantly reflected on the loss of her child, and charged it upon the accoucheurs. Was very hysterical, alternately excited and depressed, until fourth day after labor, when became uncontrollably maniacal, and continued so without intermission until seen by the reporter, on the fifth day of the attack. The subsequent symptoms may be concisely stated as follows: General febrile condition; head intensely hot; eyes often staring wildly, with contracted pupils; cheeks having usually a hectic flush; tongue heavily-coated with dark brown substance, becoming towards the last dry, but generally very clammy, and re-appearing rapidly after removal;—the same also on the lips; pulse ranging from 115 to 130, generally 120 and upwards, small and compressible. At first rejected food, but after much urging began to eat, and then appetite was craving; drank often, but spat out almost as much as she took; breathing hurried, and somewhat labored; bowels regular, not disturbed in their functions; skin hot, sometimes with a clammy moisture; jactitation incessant, throws off the bed-clothes as if they annoyed her; lochia profuse and offensive; during her illness, lasting ten days, she slept several hours at night, (excepting two nights,) but invariably woke up more noisy and disturbed, and as if frightened; urine moderate in quantity,—phosphates abundant; urea and creatinine abundant; urates very scanty.

On the tenth morning of her attack she was somewhat better than usual, comprehended her situation partially, and expressed her wishes correctly for an hour or so. With this exception there was

little or no remission of the mental symptoms which were those of fear and terror. She saw her former medical attendant looking at her; she heard him threaten her; she saw her husband looking at her through the window. Her child was tormented by them both, and she screamed from the pain they caused herself. She tried to keep them off from her, and begged piteously that they would spare her child. She talked incessantly about her baby; she shouted often; she spat at persons who approached her, as if in spite at them. Without any amendment, she continued to exhaust herself by her maniacal exertions until her death, on the evening of the tenth day.

In a majority of cases, mania from puerperal influences does not essentially differ from non-puerperal mania. One feature of ordinary insanity is often greatly exaggerated in puerperal mania. The propensity to use obscene language and figures; to mingle them in otherwise correct conversation; to obtrude them at every opportunity, which may be to some extent seen in other forms of insanity, is strikingly and disgustingly manifested by this class of patients. One observer (Dr. Campbell) remarks that the patient, "though remarkably devout when sane, now launches out into such a torrent of obscene language that one would be astonished that respectable females could have become familiar with such expressions." Although this is remarkably characteristic of those who become maniacal soon after delivery, yet it is tolerably frequent in mania of the other epochs, and even in some cases of melancholia. In neither of the cases of monomania was it observed, though one of them complained that blasphemous and obscene thoughts were constantly obtruding themselves on her mind, and that she had great trouble in keeping herself from giving expression to them. Another distressing symptom, frequently met with in all forms of puerperal insanity of every epoch, is the perversion of the instinct of self-preservation. Attempts at suicide are often very suddenly put into force, and persevered in. It may be the first symptom of mental derangement that arouses the alarm of friends, as in the five cases already noted, or it may be developed at any time during the course of the attack. A lady during lactation, not previously deranged, was discovered by her hus-

band hanging in the room at night; so quiet had been her movements, that he had not been awakened. She was resuscitated, and passed into deep melancholia, from which she gradually recovered, to all appearances, so that the vigilant oversight hitherto maintained, was relaxed. No sooner did this take place than again she hanged herself. Resuscitation, followed by a similar state of melancholia, was again succeeded by apparent restoration of cheerfulness and reason, when the suicidal impulse again suddenly re-appeared. The case is not embraced in this series, and the final result I am not acquainted with. In the 56 cases twelve attempted suicide, and three threatened or contemplated such a course. The manner of attempts may be noted :—

Manner of Suicidal Attempt.	Mania.			Melancholia.			Monomania.			Total No. Cases.
	1st Epoch.	2nd Epoch.	3rd Epoch.	1st Epoch.	2nd Epoch.	3rd Epoch.	1st Epoch.	2nd Epoch.	3rd Epoch.	
By cutting throat,		1			1					2
" drowning,		1	1						2	4
" hanging,						1				1
" several modes,		1	1		1	2				5
Total,		3	2		2	3			2	12

In Bethlem Hospital, out of 111 cases of puerperal insanity 32 were affected by the suicidal impulse.

Allied with this perverted instinct, and appearing sometimes in the same individuals, is the propensity or impulse to kill. The victims selected are usually those naturally claiming the love and sympathy of the patient.

One patient tried to kill by scalding various persons; three patients tried to kill husbands; four patients tried to kill their infants; one tried to kill children and husband; so that nine, or one in six, developed homicidal propensities. Of these three were combined with the suicidal impulse.

The emotions are usually in a state of tension, (if such a term be admissible,) so that the slightest cause induces a marked response

from them. It is difficult to set the data to prove this statement in a clear array, and I therefore content myself with a simple assertion of the fact. Grief and anger, &c., appear very readily from the slightest cause.

From the emotions, whose morbid development underlies so much of insane phenomena, to the senses and intellectual faculties is a natural transition. How far they are involved may be measured to some extent by the hallucinations, illusions and delusions that severally affect them. Classifying them according to the form of the disease, and the period of its occurrence, the results are not without interest in some respects.

Nature of Symptoms.	Mania.			Melancholia.			Monomania.			Total No. Cases.
	1st Epoch.	2nd Epoch.	3rd Epoch.	1st Epoch.	2nd Epoch.	3rd Epoch.	1st Epoch.	2nd Epoch.	3rd Epoch.	
Hallucinations of hearing,		2	2			1				5
" " sight,		2				1			1	4
Illusions of hearing,			1							1
" " sight,		1								1
Hallucinations of sight and hearing,			1							1
" " " hearing & smell,									1	1
" " hearing, and illusions of sight,		2								2
Delusions,	2	4	4		2	2			1	15
Totals,	2	11	3		2	4			3	30

More than one-half, therefore, of the 56 cases were more or less under the control of some form of illusion. They heard voices directing them to do this, or to refrain from that. They saw robbers, or deceased relatives, or acquaintances, or faces constantly peering at them from the ceiling or the window. Several entertained that most harrassing delusion that they were eternally lost, having committed the unpardonable sin; one that her husband had bewitched her, and another that she could cure all the sick by laying her hands upon them. In one case, ecstasy "rapt her soul in Elysium," but soon the scene changed to the blackness of despair, and a fear of demons who were tormenting her took possession of her.

The physical symptoms of puerperal insanity do not differ essentially from those common to non-puerperal insanity. The early symptoms of the acute stage of puerperal mania, in its most aggravated form, have been described. A less degree, but a similar kind of morbid phenomena characterizes the early stages of that form of disease in general. The head is usually hot, sometimes intensely so over the sagittal suture; the cheek may be flushed, but this is by no means constant. In a majority, perhaps, the face bears a blanched and haggard aspect, and there is a peculiar physiognomy which is not so apt to strike the observer while it is present, as to be recalled to memory when it has given place to an improved appearance. There is a want of harmony in the features—some of them seem to express one emotion, while the rest wear a different, perhaps opposite cast. With all this there is usually blended a care-worn look of anxiety somewhat piteous. The face is thus rendered rather repulsive than otherwise, but when the patient improves this look disappears, and the features settle down to a calmer and more harmonious expression, and we wonder why it was we formerly thought the face anything but attractive. Thus it is a common indication of improvement when a patient begins to look more handsome. Sometimes this attracts the attention of her attendant, who observes something of this sort: "How pretty Mrs. A. looks to-day! I really never thought she was so good looking!" And such remarks will generally be found to coincide with the date of amendment.

The pulse in the early stage ranges from 100 to 110, even as high as 120, but this gradually comes down to an average not exceeding 105, and lower as improvement takes place, or as the more chronic form becomes impressed upon the disease. The pulse is usually very compressible, and, however violent the symptoms may be, it is not more influenced in its force and speed by these circumstances than it would be by the same muscular exercise under ordinary circumstances, and perhaps not so much. One point is to be noted. The variation of the pulse when sitting or standing, is much greater than in other diseases under the same apparent excitement. This is also the case in melancholia and monomania, although in these the ratio of the pulse is less, and the volume smaller.

The tongue is coated at first with a thick, creamy substance, composed in part of thrown-off epithelial scales, intermingled with an abundant algous growth. This gradually gives way to a thin, whitish coating, which is usually to be found in the ordinary course of the disease. The salivary secretion in all forms is exceedingly active. Spitting is almost universal among such patients.

The bowels are often troublesome in the early days of mania, from a distressing diarrhœa; more often constipation of a very persistent nature is present. This is especially the state of affairs in melancholia, where costiveness is either constant, or less frequently alternates with sudden and distressing diarrhœa. The renal secretion in the varieties of puerperal insanity is worthy of a more extended investigation than it has received from any observer. I have not been able to make a quantitative analysis of the urine in any case. A few observations, on certain leading constituents only, have engaged my attention. First among these is the relation of the phosphates in the urine, in this disease. They seem to be greatly increased during the stage of excitement, and may perhaps serve as a guage of the consumption of nerve-force. In one case, which I carefully examined, an abundant crop of oxalates with an increased quantity of urea, as shown by the facility with which the crystals were spontaneously deposited in the slide, was easily demonstrated. In most cases I apprehend that the urine is slightly alkaline or neutral soon after discharge, but soon becomes acid, and is so generally when examined. The growth of *penicillum glaucum* is rapid and abundant in every specimen I have met with. As the patient improves the urates appear more abundantly than before, with a proportionate decrease of the phosphates. In some specimens the triple phosphates, in differently-sized prisms, are abundant, and in many cases might undoubtedly lead astray, for they often arise from the presence and decomposition of foreign substances in the urine, (as leucorrhœal or lochial discharges,) and the consequent ammoniacal evolution that ensues.

The influence of puerperal insanity upon the two secretions, (if one of them can be so termed,) the milk and the lochia, remains to be

noticed. The general belief has obtained that these were stopped, or at least superceded by the occurrence of insanity. In many cases the lochia remained during the attack as in ordinary circumstances, and apparently ran its course without any reference to the disease whatever. So with the milk, those who were nursing continued to secrete it as freely as before, or if the quantity were diminished a sufficient explanation was at hand, from the special circumstances of the case, to account for that decrease without invoking the aid of the disease itself. Indeed, it often happened that special means had to be resorted to in order to prevent the secretion of milk, no longer required in the absence of the child; the neglect of which had sometimes caused induration of the breasts, and its attendant suffering. I may here mention, to save a recurrence to this topic, that I have found the application of belladonna to the breasts of great service in these cases, to arrest the secretion of milk.

The already extended length of these remarks induces me to hasten over the detailed symptoms of improvement, and approaching convalescence. In the main they consist in a gradual subsidence of the more violent symptoms in mania, or in melancholia and its allied forms, and a gradual loosening from that abstracted condition which hitherto held the mind in thralldom. The sleep is more regular, and produces better results. The patient awakes more refreshed, and is better after sleep than before, which is not the case in those who do not improve. The features, as I have before remarked, lose their "unsettled look," and compose themselves into "greater unity of expression." The re-appearance of the catamenia at the proper periods, and of normal character, without change in the mental condition, will assist in forming a favorable prognosis. Sometimes there are critical terminations. A febrile attack may ensue in this as in other forms of insanity, and with its favorable termination the mental disorder also disappears. But a more common crisis is the appearance of a crop of boils, which, though troublesome enough to the sufferer, may be heartily welcomed as the precursor of returning health. As convalescence approaches the patient becomes fleshy, sometimes more so than in health, but this usually subsides to

the usual condition in robust health. On the other hand, the becoming fat without any corresponding improvement in other symptoms, is a very serious element in an unfavorable prognosis.

The prognosis of puerperal insanity is stated by writers in exceedingly favorable terms. The proportion of recoveries is quite large, according to the following authorities :—

Dr. McDonald records that 80 per cent. of his cases recovered.

Dr. Webster thinks that "three in every five cases of puerperal insanity may be confidently expected to recover within the year."

Dr. Haslam cured 50 out of 85 cases at Bethlem.

Dr. Burrows records 57 cases, of whom 35 recovered.

Drs. Gooch and Prichard have considered these results as indicating a less favorable prognosis than the circumstances would justify, inasmuch as the cases are taken from hospital practice, and usually do not come under care in the most recent, and consequently curable stage of the disease. Dr. Gooch observes: "Of the patients about whom I have been consulted, I know only two who are now, after many years, disordered in mind, and of them one had already been so before her marriage."

So far as regards the present analysis, the following results obtained :—

Recovered	31	persons or	55.35	per cent.
Improved	4	" "	7.14	" "
Died	6	" "	10.71	" "
Were not improved	15	" "	26.78	" "
Total	56			

Pursuing the plan hitherto carried out, I have given, in the accompanying table, these results, arranged with reference to the epoch in which the attack originated, the form the disease assumed, and the duration of the attacks :—

Period of Origin.	Form of Mental Disorder.	Results.	Duration of Attack.															
			Within two months.	Three months.	Four months.	Six months.	Eight months.	Ten months.	One year.	Eighteen months.	Two years.	Three years.	Four years.	Five years.	Ten years.	Twenty years.	Totals.
1. Occurring during pregnancy,	Mania,	Recovered,	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
		Improved,	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
		Not improved,	..	..	..	..	..	..	..	..	..	1	1	1	..	..	3
1. do. do. do.	Melancholia,	Recovered,	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
2. Occurring within two months after labor,	Mania,	Recovered,	..	3	..	2	2	1	..	2	2	..	..	..	..	..	12
		Improved,	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2
		Died,	1	..	..	..	1	1	..	..	..	..	..	..	..	..	3
		Not improved,	..	..	..	..	..	..	..	1	1	2	..	1	1	..	6
2. do. do. do. do.	Melancholia,	Recovered,	..	..	..	..	..	1	..	1	1	..	..	..	..	..	3
		Improved,	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
		Not improved,	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. do. do. do. do.	Dementia,	Not improved,	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Occurring during or immediately after lactation,	Mania,	Recovered,	2	..	..	..	1	..	2	1	..	..	..	..	..	..	6
		Died,	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
		Not improved,	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
3. do. do. do. do.	Melancholia,	Recovered,	..	1	2	2	..	..	..	..	1	..	..	..	..	..	6
		Not improved,	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. do. do. do. do.	Monomania,	Recovered,	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
		Died,	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
		Not improved,	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Totals,			3	4	2	5	7	4	4	5	6	3	5	4	3	1	56

It will be observed, that of the 37 persons laboring under mania, 19 recovered, 3 improved, and 4 died, 11, after periods varying from eight months to ten years, remaining unimproved.

Of the melancholic, and other depressed forms of mental disease, including nineteen persons, twelve recovered, one improved, two died, and four had received no benefit, in periods of from four to ten years.

Of seven cases occurring during pregnancy, three recovered, one improved, and three were not improved.

Of 29 occurring within two months after parturition, fifteen recovered, three improved, three died, and eight received no benefit from treatment.

Of 20 cases occuring during lactation, thirteen recovered, three died, and four were not improved.

We have already seen that these 56 persons had previously suffered, in some instances, from one or more attacks of puerperal insanity. Taking the number of these attacks as the basis of our calculations, we have the following interesting results :—

Period of Attack.	Recovered.	Improved.	Died.	Not Improved.	Totals.
Occurring during 1st epoch,	7	1		3	11
" " 2nd "	29	3	3	8	43
" " 3rd "	15		3	4	22
" in 2nd or 3rd, (which unknown,)	6				6
Totals,	57	4	6	15	82

This would give a ratio of 69.51 per cent. of recoveries from attacks.

An interesting inquiry may arise, whether the chances of recovery are lessened by the previous occurrence of attacks in the individual? Some light will be gained by investigating the results of the attacks, embraced in the present analysis :—

Number of Attacks.	Recovered.	Improved.	Died.	Not Improved.	Totals.
First attack,	38	4	5	8	55
Second "	14			4	18
Third "	6			2	8
Fourth "	2		1	1	4
Totals,	60	4	6	15	85

This is exclusive of one patient who had several attacks, (the number not ascertained). We may safely assume two attacks, though three or four would probably be more correct. But *four* of the first attacks were non-puerperal in their character; deducting these, and adding the two as above, we shall have the following proportion of recoveries in 83 known puerperal attacks :—

Recovered from 1st attack.....	35 out of 52;	or 67.3 per cent.
" " other than 1st attack,.....	23 " " 31;	" 74.2 " "
Total,.....	58 out of 83;	or 69.8 per cent.

Thus it would appear that the first attack is more disastrous to life and reason than when several attacks have been safely borne. If we take those who did not recover, or those who died, and make the same comparison, we shall arrive at the same result.

The influence of time upon the prognosis is shown in the general table of results. We may notice more particularly a few of the more important points, in this connection :—

Within six months, 13 recovered, and 1 died; in one year, 10 recovered, 3 died, and 2 did not improve; in 18 months, 4 recovered, and 1 did not improve; in 2 years, 4 recovered, 1 died, and 1 did not improve; over 2 years, 4 improved, 1 died, and 11 did not improve.

Before we pass from this branch of our subject we must advert for a moment to yet another inquiry, which, if it could be fully answered, would give us a much better and more true appreciation of the results of the cases than we could otherwise attain. How many of those who recover remain able to discharge the usual

duties that devolve upon them, as they did before they were attacked? And how many relapse when brought into contact with the cares and anxieties of every-day life? I regret that I cannot give as full a solution of these important questions as I could wish. I may state, as an impression from general experience, rather than from any result of special investigation, that while a patient who recovers from an attack of puerperal insanity is rendered very liable to a recurrence from any subsequent delivery, the liability to insanity at other times, and from non-puerperal influences, does not seem to be increased in the same extent (at least,) as if the previous attack had been of an ordinary character. Of the 31 persons whose recovery has been noted, the subsequent history of *eleven* is unknown to me; 6 remain well, at the end of two years; 2 after eighteen months; 4 after one year; 3 after six months; 2 after three months since their last attack. One case (less time having elapsed,) is omitted. Two cases relapsed; the one after a period during which her health was complete, and the other after three months freedom from any mental disorder. In the first case, brutal treatment from her husband was the exciting cause of the relapse, as it had probably some share in the production of the first attack. In the second, nothing is positively known to have induced the recurrence of the disease, unless the cares of her family proved too harrassing for her previously enfeebled mind to resist.

The causes of death in six cases were noted as follows:—

Two died of apoplectic seizures. In both the attack was sudden, in the midst of the ordinary course of mania, and was not preceded by any premonitory symptom. One case, of monomania of fear, died of fatty degeneration of the kidneys. Several months before death, general anasarca was developed; the urine was exceedingly albuminous, and abundant in renal casts gradually increasing in size, and in their clear, waxy appearance, as the disease progressed; with these oil-globules were sometimes discovered. One case died of mania, as already described. One died apparently of no special disease, but gradually declined in strength, and flesh, and vital energy, and passed away after ten years of mental disquietude, and unceasing suspicion.

One patient died from pharyngeal abscess. Her insanity had been of fourteen months duration.

A few words on the treatment of these cases must bring this paper, already too long, to a close. No special means were resorted to. Such indications as from time to time appeared, were met with appropriate treatment. In a majority of the cases, anodynes, in some form or other, entered into the medicinal treatment. Morphine and camphorated tincture of opium, were perhaps the most frequently called into requisition. Both in mania and melancholia they seem to relieve the tired brain from the fatigue of its own teasing vagaries, and, besides the inducing of sleep at night, exert a beneficial effect. Tonics are also generally required, and none are better than the various ferruginous compounds. The citrate, the tartrate, the muriated tincture may be used, as the taste of the physician or the special case would suggest. The carbonate combined with conium, "Brigham's mixture of iron and conium," with the occasional addition of morphine, answers admirably as a general tonic.

In the sleepless ravings of some cases, chloroform may be cautiously applied. In a few cases it was useful for the immediate purpose of inducing sleep, but further than this I have not observed any marked effect on the course of the disease. A more reliable course for a more permanent benefit to this class of patients, is the free administration of diffusible stimulants. Where opiates fail to induce sleep, and chloroform can only induce temporary quiet, these often act like a charm, in soothing irritation and producing good, refreshing sleep. Wine, spirits, ammonia, sulphuric ether, according to the special exigencies of the case, are thus beneficial.

Cathartics have always played a very conspicuous part in the treatment of insanity, puerperal and otherwise, ever since "Naviga ad auticram" conveyed a reproach, as well as suggested the therapeutic means to put it away. But it may be doubted whether the practice has not often been carried too far. Their occasional use in this disease is undoubtedly proper, not because the patient is insane, but to procure relief when she is constipated. In the same way emetics may be occasionally useful. In both cases it is rather to remove causes of disturbance, than from any other reason.

In two or three cases I have seen great benefit from the continued use of quinine in moderate doses, with an occasional anodyne. They were of a low, nervous, melancholy character, with loss of appetite, inability to apply themselves to any object requiring attention, and a depressing, somewhat hysterical state of feelings.

In a word, the treatment of puerperal insanity is, to brace up the enfeebled body and shattered nerves, to procure as absolute quiet and repose for the organ of the mind, as we gain for a broken bone by the use of splints. To devise the special means by which this end may be attained, constitutes the difficulty of treatment in the one case as in the other. And there is, in both cases, a point in their history, when, passive treatment having done its work, it needs to be replaced by action of the limb, or of the brain, as the case may be. To recognize the exact time when this point is reached, and to make the change of means judiciously, should ever be objects of the greatest care. When mental exercise can be safely substituted for mental quiet, (now passing into lethargy,) excitement of the emotions replace indifference, then they are not only proper, but almost imperative. But, to be too hasty in this matter, is only to renew the former trouble. On the other hand, too long delay allows the patient to sink into partial fatuity.

Of the pathology of puerperal insanity I shall not now write, as a much greater space would be required, to consider that important subject at all satisfactorily, than the few lines which I could have the assurance to add to these remarks.

CASE OF MANIA WITH THE DELUSIONS AND PHENOMENA OF SPIRITUALISM.

C., A FEMALE, aged 25, unmarried, a seamstress, bred an Episcopalian, common-school education, born in Canada, of English parentage, was admitted to the Asylum, Dec. 28, 1858.

The patient is of medium height; slightly built; has narrow, sloping shoulders; light hair and complexion; looks anemic and emaciated. She replies readily to questions, but is not talkative; appears a little depressed, but is calm; memory excellent; exhibits no delusions; no singularity of manner, other than a depression and lassitude, which would be natural to any one in her apparent general health, after exposure to cold and fatigue. No deception has been used to induce her to come to the Asylum, nor has there been the slightest occasion for such a measure. She seems fully to realize her condition, and herself suggested the trial of treatment here. At parting with her friends she shows no undue emotion, and appears as though accustomed to use more firmness and self-control than is common to persons of her sex and age.

Most of the particulars of her history, and of her disease, were given by the patient, at the time of her admission. Subsequently, further details were given by her mother and sister. From these, and from statements made by the patient since her convalescence, we combine to form an account of her case previously to the date of her admission. No hereditary tendency to mental disease is known to belong to the family. The father, however, is a man of violent temper, and very eccentric disposition and habits. The maternal branch is markedly disposed to phthisis. The grandmother and two maternal aunts have died of this disease; and the mother, a maternal aunt, and a sister of the patient, have reached different stages of the same malady.

C. was a frail, though not a sickly child and girl, to the age of 15, when she suffered severely from an attack of scarlatina, and its se-

quelæ. Among the latter, was the entire loss of hearing in the left ear. She grew up kind and gentle in disposition and manner, though rather opinionated, and of firm purpose. The circumstances of the family were such as to throw much responsibility upon her, and from the close of a brief period at school onward, she labored constantly with her needle.

Six or seven years previously to her admission to the Asylum, C. began to interest herself particularly in the so-called Spiritual phenomena. She frequently attended the meetings of private "circles," listened to many lectures, and read many books upon the subject. As the general excitement produced by the novel phenomena subsided, she became less engrossed with them; especially as after many efforts she did not succeed in becoming a medium. She continued, however, to associate with Spiritualists, and to read the various publications of the sect. Two years before her attack of insanity, she withdrew from the Episcopal communion, and went entirely over to Spiritualism. At this time, and up to the incubative stage of her mental attack, the faith of Spiritualism, she asserts, had not so lively and constant an interest as previously. Her opinions had become settled in regard to it, and her work, from which she allowed herself no respite, required all her time and attention.

Early in the summer of 1858, the feeble state of C.'s health began to awaken the anxiety of her mother. Her appetite was very small and capricious; she had grown pale and emaciated; she addressed herself to her work with much effort, and was quickly fatigued. In June, she was exposed to cold just previously to a menstrual period, which passed without performance of the function. The menses did not afterwards appear until her convalescence in the Asylum.

About this time she began to have a strong desire to become a medium, and at convenient times, both when alone and in company with her spiritual friends, to abstract herself as much as possible, so as to bring this about. She soon after began to hear the "raps," then to hear voices, and finally to be "impressed." Up to a few weeks before she became insane, however, the raps were not made

intelligible to her, but were heard mainly at night, at the head of her bed; the voices merely called her by name, and the impressions were very faint. But she had begun to "develop," and was encouraged by her associates in the Spiritual faith to persevere in attaining a mediumship. Two weeks before her attack, she was in the habit of acting daily as a trance and speaking medium. Her manner had at this time become considerably changed; her movements were peculiar, and she had frequent, brief periods of reverie, which her friends thought to be voluntary, and for the purpose of inducing spiritual impressions; but which, she now says, were mostly in obedience to the seeming command of spirits. During this time she was steadily failing in general health, almost wholly abstaining from food, her sleep very insufficient, and constantly interrupted by visions, and raps and voices.

One week before she became manifestly insane, she was seized with severe febrile symptoms, and confined at once to her bed. The physician who was sent for, found her with a deeply-flushed face, staring eyes, and a very frequent and feeble pulse. She was tossing upon her bed, as if in great pain, and her attention could not be gained for a moment. Her condition daily became worse. She seemed to suffer intensely from headache, and pain in the abdomen. Prostration was more marked, and she was at times thought to be dying. Little could be done for her in this state, and no special treatment was attempted.

On the day before her insanity was developed, she suddenly became free from pain, and able to sit up, and converse calmly and intelligently with those about her. She told her mother that she was impressed that she should die before the next morning, or else should become insane. She then gave directions to meet either event. If she should die, her clothing and effects were to be disposed of in a specified manner, and advice was given in regard to pecuniary and family matters. If she should become crazy, her conversation and conduct must not be regarded, and she must be managed without regard to her fancies and desires. On the next morning, her manner had greatly changed, and she was manifestly insane. She accused

herself of having been very wicked, in that she had not done her duty to her friends and to herself, and said that she was in consequence crazy, a burden to her mother, already charged with the care of another daughter in the last stage of phthisis, and herself feeble. As a relief from this, she was impressed, she said, to take her own life, and should do so.

For two weeks after this, and to the time of her removal to the Asylum, she required almost constant care, by day and night. During several successive days, she would appear constantly possessed and controlled by spirits. Sometimes they spoke through her, commanding her in the third person, at one moment to go to a distant part of the town with a message to a certain one, and in the next breath directing her to go to another room of the house, where it would be told her what she should do. Again it was impressed upon her, or she distinctly heard voices near, directing that she should not take medicine and food; that she should warn or denounce certain persons; that she should speak or remain silent; and that she should take her life in a certain manner. In the effort to obey these commands, many of which were trivial, contradictory, and impossible, she would be greatly perplexed, and at times seem in utter despair. Generally, however, her state was one of exaltation. Her voice was loud, her manner imperious, and she resisted with much strength, though not passionately, when interrupted in carrying into effect the directions of the spirits, and would appear to her friends perfectly natural in manner and speech. Her fellow Spiritualists assured her that nothing was wrong with her, and that she was only passing through a special and extraordinary experience, in her development as a medium.

From her mother's account of this period, there was nothing in her behavior when acting most insanely, or when most calm and rational, to indicate any change in her disposition or sentiments, or any delusions, except such as grew naturally out of the belief in the reality of her mediumship. She never evinced any irritability, or passion, or manifested any selfish desire, or—except in her capacity as medium—any irrational purpose. In transient intervals from spiritual

influence, sometimes lasting several hours, she would desire those in charge of her to bind her to the bed, that she might be unable to carry out purposes, dangerous to herself or others, which she would be directed to attempt. She also wished to be taken to the Asylum, in order that her mother and friends might be relieved from her care.

Arrived at the Asylum, her appearance is such as has already been described. Here, for the first four weeks, there is little change in the patient's condition, mentally or otherwise. Through her sense, little if at all impaired, of the great change from her friends and home to the strange surroundings of even a convalescent class of the insane, all the quasi-spiritual influences, except fleeting impressions rarely experienced, are shut out. Rest, food and baths are taken by her as prescribed, without objection; mild anodynes procure her sufficient sleep, and some distinct improvement begins to be expected. She has now no active insane delusions; but she believes her former spiritual possessions were real, and that she has not been insane.

At the beginning of the second month, however, she began gradually to relapse. Transient fits of abstraction were succeeded, after a few days, by hours of deep reverie. It was necessary to urge her to lay aside and put on clothing, and to take food and medicine; to which she sometimes made considerable passive resistance. At times she would make no reply to questions, but, when she felt at liberty to do so, would state clearly the reasons for her behavior, all of which were founded upon the theory of mediumship. The possession grew steadily more constant and controlling, and she became much emaciated. Cod-liver oil, ale, and generous diet were administered to her with difficulty, in sufficient quantity to meet this indication.

She has reached the lowest point of emaciation and enfeeblement, and that of the most complete control of her delusion, in its passive form, about the middle of March. She stands upon the hall, a mere skeleton of her former self. Her feet and hands are purple and swollen; her eyes are protruded, fixed and staring; her attitude and countenance show the most intense attention to the workings of her own mind, and no interruption can for a moment distract her. Her hand lifted up retains its position until it is replaced. Being placed

upon her seat or upon her bed, she springs, like a bent sapling, to the erect position. She attends to none of her wants, but is nearly passive to the necessary attentions of her nurse. Upon being fixed in her seat, to remain during a part of the time, she makes no effort to rise, after the first moment, but for some time afterwards the tears flow copiously from her staring eyes, and her countenance shows the greatest distress. She is also restrained in the horizontal position at night. No anodynes are given, but she takes largely of brandy-punch, cod-liver oil, essence of beef, and vegetable soups.

Under this care and treatment the patient slowly gained in flesh and strength, and, at the same time, the visions and passive impressions gave place to the trance-speaking, the active manifestations, and the lucid intervals, of the early part of her attack. The worst stage of this progress was reached on the first of May, four months after her admission to the Asylum. She is at this time very talkative and noisy. When at liberty, she darts constantly from one part of the hall to another,—to the doors and windows, under and upon the beds, tables and seats—in the most reckless and dangerous manner. She is now almost constantly the mouth-piece of numerous spirits good and evil, who rapidly interrupt and succeed each other. At one moment the spirit is through her talking loudly to her, commanding, and then rebuking her for the non-performance of its behests. During a brief interval, she is permitted, in her own person, to speak a few words, which, the reality of mediumship being allowed, do not give the slightest evidence of insanity. For the moment, her memory, the knowledge of her relations to those about her, and of her own condition,—as being harrassed by evil spirits with evil suggestions and commands, and by good spirits with directions most difficult, and to her devoid of all meaning, and which she is restrained from even attempting to obey,—is complete. Again the possession commences. The manner is suddenly changed, the eye fixed, and the utterances commence. At first, they are delivered in a broken manner, as in reading from a blurred sheet; then become continuous, louder and more hurried. The spirit directs the doctor to remove "the girl" to the convalescent ward, to the garden, and to the next

room in a single breath. Part of a sentence is here interjected, as from another source, when the first spirit upbraids her for being the medium of the devil.

A few days after this, she has longer intervals of freedom from spiritual control, and converses rationally and calmly. In answer to a question, she says that the attempts to run swiftly along the hall, and to get on the tables and under the beds are sometimes her own, made in mere desperation, and sometimes from impressions by what seems to be her guardian spirit, that she may thus escape from the possessions of the numerous evil spirits that constantly harrass her. She says that she is not crazy; though sometimes, in her desperation and distress, she feels that she has almost become so. While regretting exceedingly that she ever tried to become a medium, and wishing that she might be wholly rid of communications from all spirits, good and evil, she still thinks that it was through some fault of her own that she has been given to be struggled for by so many spirits, of every kind. Had she not in some way offended the guardian spirit, she might now have been at home, enjoying occasional, pleasant and perhaps profitable communion with it. She is perplexed excessively to distinguish between good and bad spirits, when mental impressions, or trance-possessions, or voices from without, are presented to her. Sometimes she can recognize the approaches of bad spirits as such, and then resists, sometimes successfully, becoming their medium. But often they come as by surprise, or stratagem; interpolating her own thoughts, or the communications of good spirits with theirs, and sometimes in such a manner that she can not possibly distinguish between them. Her description of the impressions, as "foreign thoughts;" of the voices as sometimes loud and distinct, sometimes requiring close attention, and proceeding from beside her at one time, and again from overhead, are very clear and consistent. She complains much of exhaustion from want of sleep and rest, and it is promised that her nightly anodyne shall be resumed.

On our visit to her the next day, she has, within the previous eighteen hours, taken ten grains of the alcoholic extract of *cannabis indica*. She had a long and refreshing sleep last night, and to-day

is nearly free from the spiritual obsessions. She says the drug has made her quite stupid, and has especially driven away the appearances of good and bad spirits, as lights and shadows, which have almost constantly attended the approach of their communications. On the other hand, the communications are more by voices from without than by impressions, to-day, and she thinks that if her ears were filled with cotton-wool she would be entirely free from them. They are not, however, so urgent or vexing, nor do the spirits interpolate, frequently, her own thoughts and words. At a pause in the conversation here, she assumes the trance-expression, and the spirit of her grandmother, a "bright spirit," speaking through her, says, that she (C.) "is a very crazy girl;" but the patient immediately adds, in her proper self, that she can not believe it, and that she is forced to acknowledge that the spirit has often deceived her, in predicting her removal home, the burning of the house, and other things.

This condition continued, varying a little from day to day, but without marked improvement until the 1st of September, when the intervals began to grow longer, and the spiritual influences to be less urgent and distressing. About two weeks subsequently she one day fainted, was delirious for an hour or two afterwards, and during the night had the usual premonitions of what proved to be a mild attack of pneumonia. On her recovery from this, there was manifested a degree of mental improvement, which at the end of a week became a decided convalescence.

Soon after becoming able to sit up, she asks for books and the company of others, to divert her mind from the impressions which are yet presented. She says: "I have heard no voices for several weeks. Thoughts sometimes come to me that are not my own. They seem to me to be those of spirits; though I do not now either see or hear any thing wonderful. They are not directions, and compel me to nothing, but seem simply strange thoughts. When they are most queer or silly, then I think they are from some one else, and can not be mine. Again I do sometimes fear that they are all really my own." In answer to a question she says: "I am sure they were

spirit-voices and no hallucinations I used to hear. Other mediums heard and were impressed with much the same communications, before I came here. I acted very crazily indeed on the other ward, I know, but it was all on account of the confusion and contradiction of visions, and voices, and impressions. I know it was not disease or delusion in any sense, on my part, but am sorry enough that I ever became a medium."

Three months later, and at the writing of this notice, our patient's convalescence is still uninterrupted. She is better in flesh and strength than for many years past. Her appetite and sleep are normal, and all the bodily functions are regularly and properly performed. She occupies herself most of the time at fancy and domestic work; is quiet, not talkative, not at all irritable, peevish, or difficult in any way; needs no restriction as to her movements, occupation, or otherwise. Yet, technically, she must be considered as not fully emerged from the stage of dementia, following her maniacal attack. The character and degree of this dementia is fully described by saying, that she is like a girl of 15 rather than of 25 years of age. Her manner is free and childish; she is not firm or steady in her purposes or pursuits. Not only does she not reason so quickly as in her mania, but less logically. Her descriptions are less vivid not only, but less clear. To nearly the same extent in which her mental powers were augmented in the first stage of her mania, they are now impaired. But besides the slight enfeeblement of her mind, two of the most marked characters of her mania have left their trace. The foreign thoughts do still at times interpolate her conscious thoughts; and there is a fancy, which, unless her attention is earnestly directed to it, she mistakes for a full conviction, that if she were again at home the sense of strangeness and change, attending the consciousness of her mental impairment, would be relieved. The latter might, of course, be supposed to exist without reference to her mania, but it can be readily traced back in conversation with her, and through the copious notes of her previous trance-speakings and oracular sayings, to the fact that an urgent and repeated command of the spirits was, that she should leave the Asylum and return home.

Here was the healthful desire to fill a useful and appropriate sphere, developed, under a subversion of the law of suggestion and association of ideas, into some of the most striking manifestations of mania. The foreign thoughts now seem to be a habit, of which the brain, in its present feeble condition, cannot be rid. These thoughts now obtrude mostly when she is fatigued. When she is not at all wearied, and is occupied with anything but her own thoughts, the foreign thoughts do not appear. If she submits to a disposition to reverie, they are at once presented. They are not as before suggestive or compulsive of any action, but quite passive, and, she says, mostly silly and queer. She recognizes, too, that they are sometimes suggested by previous thoughts, and even by circumstances around her. There is also, to her, more or less order of sequence in them, which was not the case formerly. As the thoughts do not now tend to influence her actions, so they do not usually affect her emotions. Occasionally they are slightly pleasurable, and she is tempted to indulge in them, but is advised not to do this. It does not answer, she says, to try "to stare them away as craziness," but she can easily occupy her mind with some trifle of fancy-work or gossip, and thus keep them from her.

Her memory of her entire experience of the past year is excellent. She is sure that for the most of the time, when even at the worst of her mania, she was conscious of rational, connected thoughts, and proper emotions, as being her own, while at the same time the superimposed notions and passions were alone manifested in her conversation and conduct. At the very climax of a paroxysm of trance-speaking, in the midst of the most vivid and rapidly-changing impressions of numerous spirits good and bad, crowding and interrupting each other in their possession, the two trains of thought would sometimes become confused; but the consciousness that there yet were her own personality and its appropriate capacity for thought, distinct from all else, still existed. This was in her mania. In the depth of the dementia which preceded it, she is by no means sure that she was always self-conscious. She remembers that some visions were vacant and shadowy to the last degree; that they had only the

slightest relations to time and space, and to her conscious self. This period she remembers distinctly only by the interruptions of feeding, dressing, moving, and otherwise caring for her. Except at the worst, however, she could recognize her waking reveries, in which the spirits were always present, from the dreaming of sleep. Her memory, in the momentary intervals of this passive obsession, was full and minute, especially as to her childhood. It was common at this time, in a vision of spirits, that one of them should reach out toward her, and say that he took her memory from her, when for a time the past would be a blank.

Her belief in the theory of Spiritualism, and of its reality in her own experience, is much shaken, but not wholly overcome. The facts and analogies in her own case going to contradict such a theory, she appreciates to an extent that is quite surprising. But as her belief in Spiritualism was not formed during her insanity, so it does not depart with the disease. She now uses, when for a moment pressed as to the manner of reconciling her own experience with the theory, an argument that any Spiritualist might use in the premises; namely, that as things in the other spheres do not differ essentially from what is found in this, the spirits who directed her dangerous and violent actions, might have been as crazy as they made her appear. Her usual explanation, however, is that given when in the calm moments of her mania; viz., that some grave fault of hers, at the beginning of a normal mediumship, brought all the subsequent trouble upon her, as a punishment. At the same time, she desires not to believe in Spiritualism, and finds no small encouragement in the fact that those about her refer to it only as a wild hypothesis, connected with some unclassified facts of nature. She feels that if the seeming facts of her experience were real, she can have no safety from their repetition; whereas, if they are only the products of disease, they may be avoided.

An important, general inquiry in such a case as this, is as to the origin of the mental disorder. It may be stated, in the first place, that mental impressions, either emotional or intellectual, seldom cause true cerebral disease. The statement of some train of reasoning in

such a manner as to overwhelm with the conviction of an important truth, and powerful and sudden disturbances of the emotions, do sometimes bring on an unmistakable insanity; but such instances are comparatively rare. We do not forget that extraordinary notions and perverted states of feeling are at times powerfully contagious. In these, however, are illustrated only the weakness and imperfections of the brain, and it is but rarely that they are associated with the symptoms of a disease, active, and direct in its tendency to destroy the functions of the organ.

Again, those deep convictions and emotional shocks, which sometimes cause insanity, rarely prolong their influence to give shape to the deranged manifestations. A young woman, now under our care, who became maniacal in the hour of her supposed conversion at a camp-meeting, was from the first violent, profane, and obscene, and since her convalescence began, has manifested no special interest in religious matters. Another, who suffered the agony of anticipated shipwreck, lapsed at once into profound dementia, in which she lay for weeks, with only pleasant, dreamy imaginations and visions. At the same time, those mental states which have been most habitual and active in any person, will no doubt be most likely to re-appear prominently in an attack of mental disease, subsequently developed.

All these considerations, with many others, must be taken into account in attributing the cause of an attack of insanity. The popular voice, in the case under notice, was loud in indicating Spiritualism as the cause, and there was certainly much, in the circumstances of its origin and the marked delusions, to suggest and support such a view. But it seems to us more nearly to represent all the facts that have been given to say, that too close, sedentary labor, acting upon a feeble and highly strumous organization, was the principal cause of the mental disease.

It is hardly necessary here to allude directly to the bearing of the case upon the hypothesis of a supernatural origin for the so-called spiritual phenomena. So far as these are mental, they have the closest analogy to those of hysteria, hypochondria, catalepsy, and several forms of insanity proper, constantly under our observation, and

can not for a moment be supposed to be "spiritual," by any one moderately familiar with nervous invalids, or the insane. The mental manifestations of Spiritualism are, indeed, not in the least degree novel or extraordinary. The physical phenomena with which they are sometimes related, while they are not new, are, it must be admitted, extraordinary. Nothing of the kind in the history of wonders through all ages are so striking, or so wholly unaccountable upon any theory of illusion, or by any natural law yet discovered. In the extent and power of their development, and in the evidence which can be brought to bear in their behalf, they are entirely without precedent. Many of the phenomena greatly resemble those of electro-magnetism, and there is a close analogy in the conditions under which they are severally produced. The two forces are not, however, as yet convertible, and hence can not, in a scientific sense, be considered identical. But while we do not offer any explanation of the physical facts, there is this to be said; namely, that they depend upon the mental manifestations. The latter shown to be as common and natural in their origin as the phenomena of fever, and recognized as such by all experienced physicians, from Hippocrates to the present day, the physical wonders are placed at once in the long list of the unexplained facts of nature. It is in part to illustrate the first point, and in behalf of the general reader, that we have so minutely described the delusions of our patient.

What there was in the organization of this girl, or in the morbid influences under which she came, to develop from conditions so powerfully tending to pulmonary disease, both by heredity and habit of life, a peculiar cerebral affection, we can not tell. The cessation of the menstrual function, although at first a result, no doubt, of the anemic and enfeebled state of the patient, may have aided to determine the result; but this is a mere hypothesis.

The distinct febrile symptoms which ushered in this attack, and continued, with intermissions, until its abatement, are such, we believe, as are noticed in nearly all the cases in which the invasion of the mental disease has been intelligently observed. That by the early writers upon insanity, cases were not generally recognized as such

until the early stages of the disease had passed, may be readily gathered from their works. Indeed their notions of mental disease, as is evident from their definitions and classification, and the cases by which these are illustrated, were formed almost wholly from their observation of the chronic insane. This will account for their insisting upon "apyrexia," as a general or essential condition of insanity proper. It is well, also, to remember that Esquirol based his primary division of "monomania" upon his observations of the incurables of the Bicêtre. Acute cases are almost never monomaniacal; chronic cases, where they do not lapse into dementia, almost invariably become so. But in diseases of the lung, for instance, we do not give our chief attention to, or base our nosology upon the lesions which remain longest; namely, induration and adhesions. As insanity is now more generally observed and treated at an early period of its attack, errors of this kind are steadily disappearing. Even the idea of inflammation has been connected with the discussion of several forms of mental disease, by the most careful and methodical observers. We have little doubt of the scientific correctness of the notion, but it should not be made prominent in a practical way while it might hinder, among the general profession, the still further disuse of reducing measures in insanity.

The medical treatment in the case detailed is not, perhaps, that which would have been generally adopted by physicians unfamiliar with mental diseases. Here was, indeed, marked congestion of an organ, augmentation of function, and febrile reaction. Yet brandy, cod-liver oil, and essence of beef were given in the largest quantities, with a steady and permanent, beneficial effect.

The positive advantages of the moral treatment of an asylum, are indicated by the long intermission in this patient's disease which immediately followed her admission. In very many cases this interval gives sufficient time to restore that condition of the general health, in which, when the moral impressions have in part lost their force, the patient is placed beyond the reach of the maniacal paroxysm. Of the value of mechanical restraint in her treatment, the good results, obvious to others, and gratefully acknowledged by the patient,

do not permit us to doubt. To a padded room in such a case, as in many others, there are two serious objections. By its seclusion it yields up the patient to the unbroken control of her delusions; while, at the same time, it encourages the boisterous movements which are so dangerous in their tendency to exhaustion.

But the point of most curious, if not of most practical interest to the psychologist in this case, is the prominence of a single delusion, and its relations to the other phenomena of the insanity. Most subjects of acute mania have a dim consciousness, pressed down, as it were, by a mountain of vivid and tumultuous perceptions, of the unreality and unnaturalness of the visions and voices by which they are impressed. In many cases, there is a consciousness that certain emotions, which lead to extravagant and unusual acts, are imposed, and of a non-consent to them. But this seldom extends, so far as we know, to the operations of the higher faculties of the understanding. Usually, the observer can not detect that the patient's self is not wholly represented in the insane manifestations. Usually, we believe, the patient is unable on convalescence to trace the connection between sensations, perceptions, and emotions, which are remembered faintly as isolated facts. But in this case—perhaps from the peculiar character of the delusion, perhaps, indeed, from something in the pathological condition of the brain—all the faculties of the mind, including those of reason and judgment, are recognized as superimposed, and foreign to the personality of the patient. There was also, no doubt—and this is the most striking characteristic of the case—a logical and necessary connection between the supposed spiritual possession and the whole series of manifestations. Was not here a derangement upon one subject only? and thence the monomania of those who hold to a unity of mind. Was it not a disease of a single and separate faculty? the monomania of the phrenologists.

Let us take the most plausible view of the facts which may be supposed to show a monomania, of any kind. The patient believes herself obsessed by disembodied spirits, who have the power and right to coerce and possess her mind and body. Hence she accepts what

they offer to her belief, and attempts whatever they command her to do. Admit the truth of the primary belief, and all the rest naturally and of necessity follows. There was no change in the understanding of the patient, throughout the period of mania. Her conceptions were as clear, her judgments as correct, and her reasoning as logical as ever. At times these faculties were even augmented. There was, on the whole, let it be said,—leaving out the single delusion and its necessary results,—neither perversion nor impairment of the intellect. We also seek in vain for any morbid or other change in the affective manifestations. Nothing of the sort—at least nothing more than an intensification of her natural emotional character—was recognized by her mother, sister, or nurse, from the very premonitions of the attack to the convalescence. There was nothing morbid in her likes or dislikes, her desires, her anticipations, her hopes or fears. Not a passionate, unchaste or unbecoming expression can be recalled. Finally, we have no account of derangement of the animal propensities. There were no morbid appetites, no unaccountable impulses. If her will were coerced she recognized it. If her thoughts and words were extraordinary, interrupted and incoherent, they were "foreign thoughts," and the words of spirits spoken with her organs. If her seeming actions were troublesome and dangerous to others, she was distressed; if they were unmeaning to her, and fruitless, she was weary with them. Here is a case of "monomania of spiritual possession."

This may be a plausible, but, it seems to us, is a superficial and unsatisfactory view of the case. Is this instance of a state of disease to be described, its pathology indicated, and its progress foreseen, satisfactorily presented in such a description and definition? Yet it is upon distinctions of this indefinite and fanciful sort, that many nosologists have founded their monomanias double and triple, and in endless variety. Are not these worse than useless practically, and do they faithfully interpret, to the limited extent in which any interpretation is possible, the mental phenomena? For, granting the theory that the belief in the agency of spirits was the primary, underlying delusion of the patient, what part of the entirety of the

mental disease, in the case detailed, does a statement of this fact express? How much of the insanity does this delusion represent? If a dozen years ago, and previously to the first development of the Spiritual phenomena, an hypothesis of the relations of disembodied spirits to men, like that which has since come to distinguish a numerous sect, had belonged to a single individual, that man would have been, without doubt, mad. There can be just as little doubt that at present thousands of persons, of nearly, at least, an average soundness of intellect, hold precisely the same belief, in terms, as did our patient. The simple belief, then, in spiritual phenomena, as actual or possible facts in her experience, was not previously to her attack of mania, and is not since her convalescence, an insane delusion. It became an insane delusion only when it was associated with a condition of insanity; which is, therefore, something still beyond.

While we thus protest against delusion being made of the first importance in setting forth the phenomena of insanity, it will still be useful to express the subjective phase of the disease. This it seems can not be done through a reference to any of or all the intellectual and emotional faculties, but only to the liberty or the coercion of the will. Impotency of volition, in this case, is very plainly the ultimate fact, of the class referred to.

That theory of monomania under which mental diseases are principally named from the subjects of delusion, is indeed trivial, and unworthy of the grave, practical importance of mental medicine. The other theory, based upon the phrenological one of distinct organs for the several faculties, deserves more attention. If phrenology be true, monomania deserves the rank which has been given it as a type of insanity.

We are not called upon here to deny the great advantages to science which have followed from the discussion of the phrenological doctrines. Spite of the strong reaction against materialism in mental philosophy which was excited by the too pretentious "schema" of Gall, there has ever since been a steady progress in the adoption of the positive method and terms; at least as regards a practical,

medical psychology. Indeed, we cannot treat at all intelligibly of mental disease, except from the side of physiology. Do we not really assume, in describing and discussing such a case as the above, that the brain produces the mental manifestations, in every sense as the other organs of the body attain their functional results? None of them create, none of them do more than offer conditions of change to what is presented to them. But if even the noblest results of the reason and imagination must be considered the products of a natural organ, through vital and chemical processes strictly analogous to those by which all other organic changes are effected, the will, the conscious *ego*, remains independent of the organ, in its existence. Here later science takes its issue with the phrenologists. Gall, determined to leave nothing beyond the function of the brain, made the will the result of the simultaneous action of the higher intellectual powers. Though thus denying it a special place in his craniological scheme, this definition strikes at the basis of mental and legal medicine. Many phrenologists, indeed, now make volition the function of a special organ, and deem the testimony of consciousness to the separate existence of the will, a pure delusion. To such, the conscious experience and its reflection in the conduct of a maniacal girl, at least as these can be conveyed by description, will have little force. We have ourself derived great instruction from a personal observation, however, and venture to hope that a written history will not be without some interest and value to candid inquirers in this field.

If the will be the function of an organ, have we not at least a double monomania in this case. The reference to an external, spiritual agency of all the extraordinary sensations and perceptions, which she was conscious of not being able to control, was not more constant or distinct to her, or more manifest to an observer, than the belief in a separateness of her proper self from all these mental phenomena. The latter is the delusion of the whole human race; although, partaking of the cerebral erethism, and brought out by its antagonism to the other delusion, it was more strongly manifested in this case than usual. The former is the delusion of only

a few thousands of people, and may be better availed of to give a distinctive name to this form of cerebral disease! This is the issue of an ultra materialism. Such theories of monomania are best left to themselves, and the common sense of mankind. If a practical psychology need have anything to do with metaphysics, for the sake of moral and legal medicine, it must come back to the one question in each case, of the power or the impotence of the will over the various processes of thought.

Finally, let us consider the case in a purely medical point of view. Who will doubt that in insanity, as in all other diseases, the matter of curative treatment is of paramount importance? This, we repeat, has too generally been held as a secondary consideration by writers who have formed the nomenclature of insanity. It is indeed only within a few years that insanity, in its acute stages, has been generally treated in asylums; and it can hardly be said that the custom prevails in even a few countries, but rather in a few communities. Monomania, taking the cases in which the term is generally applied, is not the name of an acute, curable disease. It is the condition of a maimed member, long after the accidental or constitutional disorder in which the impairment arose has subsided. Notwithstanding the singular relation of the mental manifestations to a single belief, which existed long before the insanity, and can not be termed an essentially insane delusion, we venture to say that no physician experienced in the treatment of mental disease, who had seen our patient at the height, and during the longer period, of her attack, would have termed the case other than one of acute mania. There were the constitutional and cerebral symptoms, already described. There was at the same time augmentation and irregularity of function; rapid and disconnected ideation, extremely vivid and changeful emotion, the appetites and instincts depressed and overpowered. For it must be considered, of course, that the impressed thoughts, the trance-speakings, the visions, etc., were as much symptoms of general mania in her as though she had not so singularly and constantly referred them to an extraneous agency. The disease exhibited the different periods of acute mania, viz: an incubative stage, of mental

medical psychology. Indeed, we cannot treat at all intelligibly of mental disease, except from the side of physiology. Do we not really assume, in describing and discussing such a case as the above, that the brain produces the mental manifestations, in every sense as the other organs of the body attain their functional results? None of them create, none of them do more than offer conditions of change to what is presented to them. But if even the noblest results of the reason and imagination must be considered the products of a natural organ, through vital and chemical processes strictly analogous to those by which all other organic changes are effected, the will, the conscious *ego*, remains independent of the organ, in its existence. Here later science takes its issue with the phrenologists. Gall, determined to leave nothing beyond the function of the brain, made the will the result of the simultaneous action of the higher intellectual powers. Though thus denying it a special place in his craniological scheme, this definition strikes at the basis of mental and legal medicine. Many phrenologists, indeed, now make volition the function of a special organ, and deem the testimony of consciousness to the separate existence of the will, a pure delusion. To such, the conscious experience and its reflection in the conduct of a maniacal girl, at least as these can be conveyed by description, will have little force. We have ourself derived great instruction from a personal observation, however, and venture to hope that a written history will not be without some interest and value to candid inquirers in this field.

If the will be the function of an organ, have we not at least a double monomania in this case. The reference to an external, spiritual agency of all the extraordinary sensations and perceptions, which she was conscious of not being able to control, was not more constant or distinct to her, or more manifest to an observer, than the belief in a separateness of her proper self from all these mental phenomena. The latter is the delusion of the whole human race; although, partaking of the cerebral erethism, and brought out by its antagonism to the other delusion, it was more strongly manifested in this case than usual. The former is the delusion of only

a few thousands of people, and may be better availed of to give a distinctive name to this form of cerebral disease! This is the issue of an ultra materialism. Such theories of monomania are best left to themselves, and the common sense of mankind. If a practical psychology need have anything to do with metaphysics, for the sake of moral and legal medicine, it must come back to the one question in each case, of the power or the impotence of the will over the various processes of thought.

Finally, let us consider the case in a purely medical point of view. Who will doubt that in insanity, as in all other diseases, the matter of curative treatment is of paramount importance? This, we repeat, has too generally been held as a secondary consideration by writers who have formed the nomenclature of insanity. It is indeed only within a few years that insanity, in its acute stages, has been generally treated in asylums; and it can hardly be said that the custom prevails in even a few countries, but rather in a few communities. Monomania, taking the cases in which the term is generally applied, is not the name of an acute, curable disease. It is the condition of a maimed member, long after the accidental or constitutional disorder in which the impairment arose has subsided. Notwithstanding the singular relation of the mental manifestations to a single belief, which existed long before the insanity, and can not be termed an essentially insane delusion, we venture to say that no physician experienced in the treatment of mental disease, who had seen our patient at the height, and during the longer period, of her attack, would have termed the case other than one of acute mania. There were the constitutional and cerebral symptoms, already described. There was at the same time augmentation and irregularity of function; rapid and disconnected ideation, extremely vivid and changeful emotion, the appetites and instincts depressed and overpowered. For it must be considered, of course, that the impressed thoughts, the trance-speakings, the visions, etc., were as much symptoms of general mania in her as though she had not so singularly and constantly referred them to an extraneous agency. The disease exhibited the different periods of acute mania, viz: an incubative stage, of mental

depression, lassitude, and general visceral derangement; the period of invasion, with at first distinct febrile symptoms, then mania not excessive, and with frequent remissions; the period of the true maniacal paroxysm; and, lastly, that of dementia and convalescence.

ABSTRACT OF A PAPER BY DR. E. BILLOD ON A VARIETY OF PELLAGRA PECULIAR TO THE INSANE.

[*Continued from page* 168.]

THE ASYLUM AT DIJON.

Dr. Bis de Berg, the medical director of the Dijon Asylum, has recently had the following case of undoubted pellagra :—

Madame V., a widow, is a person of small size, of lymphatic temperament, and has still a good constitution for one of her age; viz., sixty-six years. When nearly three years old, she had violent convulsions, that, with no other indication of paralysis, left a distortion of the mouth, which was drawn to the left side. Before she was five-and-twenty, she married a shoemaker, as poor as herself. Lively and gay, yet orderly and economical, she was happy with her husband, and did much toward improving their condition in life. Totally devoted to the care of her household and of her six children, this woman, though trained to Christian duty, gave up all religious observances. After the death of her husband, almost 20 years ago, she exerted herself still more earnestly to bring up her children, and give them a good a good start in the world. These efforts were entirely successful, and she had the happiness to see them all well placed.

But this active and industrious woman, having no longer a family to occupy her mind, and to employ her hands, began to suffer from inaction. In the loss of what had so long been her sole occupation,

she had only herself to fall back upon, and seemed condemned, as it were, to a painful isolation. The memories of her youth revived, and she began to reproach herself for having so completely neglected the religious doctrines and duties in which she was brought up. A passion for such observances now took possession of her, and she gave herself to them without reserve. She showed her remorse and her desire to atone for past errors, by an ardor altogether new. She was constantly going to church, and running after every confessor. She became careless of her toilet, and neglected the affairs of her little household. She took no proper nourishment, her sleep was disturbed, and her health gradually failed. She wandered about, and was little better than a vagrant. Soon she began to call herself the Virgin Mary, the Queen of Heaven, the Mother of God, and of many infant Jesuses! Having no longer an actual family, she took upon herself the care of this imaginary one. That she might have a sufficient supply for all these holy infants, she proceeded to appropriate and hide every thing that she could lay her hands on. Her family seeing her in this state of excitement, and fearing that some accident might befall her in the course of her nightly wanderings, concluded to place her in the Asylum. This was on March 20, 1857.

Here she manifested the same gay and joyous temper; constantly asserting that she was the Mother of God, and Queen of Heaven; and that she had a large number of small Jesuses; on which account she claimed due respect, and suitable rooms. She talked perpetually, in a light, sprightly manner, and was sometimes even noisy. The propensity to take and hide every thing that came in her way, lest the little Jesuses should suffer want, was still manifested. In the meantime, being set to work, her appetite and sleep returned, and her general health improved; though without any abatement of the religious hallucinations. She seemed greatly impressed by a visit from her children, and afterwards begged with tears that she might be sent back to them.

In February, 1858, she seemed to lose her gaiety, grew less talkative, said but little about her children, and scarcely mentioned the little Jesuses. She separated herself from the other patients, and

walked by herself. She refused to take food, until compulsion became necessary. Her sleep was disturbed. Her stomach, at times, rejected its contents. Her tongue, which was at first somewhat coated, became red, shining, and dry. Her pulse was frequent and easily repressed. Drink she would scarcely touch. A little pottage and dry bread were all that she would eat. When pressed to take more, she would say: "Eat yourself, if you choose. I cannot. I have had enough." She would confess to no pain, either in the head or digestive organs. Yet constipation and diarrhœa prevailed alternately.

Her mental depression and bodily weakness increased daily, until she began to totter in her walk. Very soon the color of her face had become a deep red, almost a violet. That she was troubled with an itching sensation, appeared from her frequent scratching. A scaly surface came and went repeatedly. The outer border of the eyelids assumed a reddish, blistered look. Near the end of April, her hands and the lower third of her arms in front, had taken the hue of the face. The epidermis seemed to thicken, and became of a yellowish white. Scabs were formed, from under which the serum oozed. An incessant itching induced incessant scratching. The desquamation became entire; the skin retaining its red, shining, violet aspect. A succession of scabs and scales appeared in large and thick patches. The patient was so weak that she could hardly stand.

In September, she was placed in the hospital; though decidedly against her will. For eight months she had been sad, and silent, and indifferent to every thing; had ceased to talk of herself and her holy family, and no longer stole and hid the means for their support.

Under better nourishment and remedial applications, she soon began to get strength. Her gaiety, her cheerful and sometimes loud talkativenes returned. In fact she is now nearly in the same condition as before the derangement of her digestive functions, and the access of the erythematous eruption. The skin of her face, arms, and hands, which had come to look like thin, transparent parchment, stuck upon the flesh, has resumed its natural softness and color.

Her treatment, during the eruptive stage, was confined to baths and blisters, and to purgatives given in soup, it being impossible to make the patient swallow.

"The above," says our colleague, "is undoubtedly an instance of the *pellagra of insanity*. The epoch at which the first symptoms appeared, and that at which they entirely departed—the change in the disease which marked the eruption—the return afterwards of the original disorder—the coincidence of these phenomena with that derangement of the digestion which preceded the cutaneous affection —all confirm the above view."

THE ASYLUM OF NAPOLEON-VENDEE.

My old fellow-pupil and friend, Dr. Dagron, now medical director of the above institution, writes to me, that in 1857, he recorded, under the head of *pellagrous symptoms*, a death resulting, as he thought, from chronic enteritis. "Two patients," he adds, "have since exhibited symptoms such as you describe under the head of pellagra. These will receive my careful attention. For 17 years I have seen frequent instances of erythematous eruptions on the hands of patients, which I have attributed to the sunshine, and some of these have died by chronic enteritis."

DEPARTMENT OF THE INSANE IN ST. JAMES' HOSPITAL AT NANTES.

Dr. Petit, the medical chief of this establishment, expresses much interest in the questions proposed. He states that it has led him to examine the hands of all the patients under his care. In about a dozen cases, he found an attenuated condition of the skin on the back of the hand, with a shining and parchment-like aspect, and in some instances there was ecchymosis below the skin. These were all in good health. The approaching spring might, perhaps, show some aggravation, indicative of pellagra.

THE ASYLUM OF MANS.

The following case is furnished by the director, Dr. Etoc Demazy:

J. A., thirty-nine years old, is a spinner, resident at Jupilles in the canton of Chateau du Loire. She is of a sanguineo-lymphatic temperament, and is the mother of two children. So far as known, there has been no insanity in the family. Since she was twelve years old, she has had digestive troubles. In 1831, she became de-

ranged in consequence of failing, through want of money, to apprentice her daughter as a seamstress. The daughter was compelled to go into a distant commune, and live with an aunt. The mother took it into her head that somebody had stolen her. In order to find her, she carried lighted candles along the roads, and in the burying-grounds. She charged her brother with selling the girl, and threatened to kill him. She appeared often in a state of nudity.

In October, 1832, she was confined in the prison of St. Calais, from which, two years afterward, she was transferred to the Mans' Asylum. She had a melancholy countenance and ruddy complexion. She answered slowly, with difficulty, and often without coherence. Lypemania was passing into dementia. There was evident emaciation, general debility, no fever, but a severe, chronic diarrhœa. On the dorsal part of her hands and wrists the skin is of reddish-white, dry, hard, and thick. In some places the skin seems to be cracked; in others it separates into scales of different size, having a pearly lustre. The diarrhœa continued till she died, (Nov. 26).

Autopsy.—Marasmus complete; eschars in the region of the sacrum. Skin of the face, hands, and wrists is thickened, and is easily separated from the underlying cellular tissue, when slightly soaked. The arachnoid membrane is thickened, and has an opaline appearance. The pia mater separates readily from the brain, which has nothing abnormal either in texture or color. The spinal cord has not been examined. The mucous membrane of the stomach is of a greyish color through its whole extent. The same membrane throughout the intestinal canal has a pale hue, and in some parts is sensibly thinned.

[We pass over some fifteen pages, occupied with accounts which Dr. Billod has received from other asylums and hospitals, to give the testimony of M. Verga in regard to the value of Dr. Billod's researches.]

"When," says the writer, "in 1853, I was investigating the causes of pellagra, and endeavoring to assign its place in nosology, I expressed the opinion that it had not been rightly arranged in the

old systems; that instead of ranking with cutaneous and cachectic disorders, its true place was among nervous affections, and those which are allied to mental disturbance. This opinion, I am happy to find, has received a remarkable confirmation in a memoir of the present year, by M. Billod. * * * At the institution of St. Gemmes, M. Billod has seen numerous instances of erythematous redness in parts exposed to the action of the sun, followed by a scaly condition of the skin, and so complicated with symptoms of digestive and nervous disorder, and so connected, apparently, with mental derangement, that he proposes to call this affection, the *pellagra of the insane.*

"In view of all these facts and statements, it is evident that my view of the subject is completely confirmed. That certain institutions have enjoyed, apparently, an almost entire immunity from the disease in question, is far from invalidating the conclusion to which I have come. Although in a comprehensive view of the characteristics, it would be impossible to mistake an affection which has so many points of resemblance to the pellagra of Lombardy, I have pronounced it not identical, and still claim that it is a species of the disease, and peculiar to the insane.

"Another important fact clearly shown by the investigation which I have made, is the frequent occurrence among the insane, and especially among lypemaniacs, of functional derangements of the skin and intestinal canal, evincing a pathologic connection between the epidermis and mucous membrane on the one hand, and the nervous system on the other.

"With Dr. Verga, I must again protest against the classification which has so long prevailed, and which places pellagra among skin diseases. As the cutaneous alteration in this disease is merely symptomatic of a morbid condition within, to call it a simple disease of the skin is about as rational as it would be to regard the small-pox, scarlet fever, and measles, as only different forms of cutaneous eruption. I refer here to the pellagra generally. To understand that particular variety of the disease which has been under consideration,

we must study henceforth those affections which are incidents or consequences of mental alienation."

[Dr. Billod then gives a brief general account of twelve cases of pellagra, which have occurred under his own observation since the publication of his memoir. He also gives the autopsy of ten pellagrous patients; all of which show a softening, either general or partial, of the white substance of the spinal cord. In none of these cases had the white substance of the brain undergone any change. In one of the ten cases, the softening was confined to the posterior nerves—in two others, to the anterior nerves—in the rest it embraced both sets. None of these subjects had shown, during life, any symptoms of paralysis. Near the close, indeed, their weakness had been such as to confine them to bed; but this debility was evidently of a general character, connected with and caused by the pellagrous cachexia.

In a note appended to the article, Dr. Billod mentions that he has just received from M. Bourlon de Rouvre, Prefect of the Maine and Loire, a report upon pellagra, made by the Board of Health for the Upper Pyrenees. The authors of this paper decidedly reject the notion that maize, whether injured or not, is the only cause of pellagra; a disease which results, as they believe, from causes which are variable as well as complex. In the opinion, however, of Dr. B., these authors over-rate the efficacy of sulphur waters in the cure of pellagra. Results equally rapid and equally satisfactory have been obtained, he thinks, at Milan and elsewhere from baths of pure water.]

BIBLIOGRAPHICAL.

Gooch on some of the Most Important Diseases peculiar to Women; with other Papers. Prefatory essay by ROBERT FERGUSON, M. D., etc. London: The New Sydenham Society. 1859.

Of the several publications with which the New Sydenham Society has bountifully repaid its subscribers, and enriched the literature of the profession, none will be read with more interest, or be more widely valuable than the essays of Gooch. It is especially in those forms of disease the pathology of which modern science, with all its improved means of investigation, can not determine, that we must rely in part upon the experience of teachers whose character and genius command our confidence. The nervous disorders of females, in their connection with the reproductive functions, are of all this class the most difficult of rational treatment. Thirty years since the first publication of these essays have hardly in any positive, scientific progress given the average medical man a higher vantage ground of treatment in this specialty than had then been attained. To the present day the best experience has gone to confirm the views which are here presented, and to render more valuable the brief and scanty writings of the author.

Perhaps the most generally valuable of these papers are those comprised in the first and second chapters of the book: on "The Peritoneal Fevers of Lying-in Women;" on "The Disorders of the Mind in Lying-in Women;" and "Thoughts on Insanity as an object of Moral Science."

The first of these it is not our purpose to notice. Suffice it to say that in his considerations on puerperal fever, concerning which almost nothing was in his time settled as to theory or practice, Gooch took the ground so generally favored by medical practitioners of the highest eminence, that "the effects of remedies on a disease, if accu-

rately observed, form the most important part of its history." The annals of medicine show that the very highest qualifications of mind are requisite in the observer to infer correctly as to the effects of remedies. In no other way has medical progress been so effectually diverted and delayed, as by the experience with remedies of those who are wholly incompetent as observers in such a field. Yet by this mode Gooch anticipated nearly all that has been since attained in the treatment of puerperal fever.

Upon the same plan the author proceeds to treat of puerperal insanity. This paper consists of a detail of the symptoms and treatment in ten cases of the disease, and brief comments upon several special points. Of the latter are some remarks on the prognosis in puerperal insanity, which are characteristic, and might have been meant prophetically as a rebuke to the numerical observers of the present time :—

" This (the numerical) would be the best mode, although none but those who have tried to procure information in this way can have a notion of the difficulty of procuring answers scrupulously accurate. But however accurate the estimate may be, it must afford a very loose prognosis for any particular case. To a question about the probable fate of a patient, it would be a vague answer to say that the mortality is as one in fifteen. It would be more like the opinion of the actuary of an insurance office than of a practical physician. The question would naturally occur, are there no symptoms in this as in other diseases by which to judge whether or no the life of the patient is in danger ?"

In answer to the question, he says " that there are two forms of puerperal mania, the one attended by fever, or at least the most important part of it, a rapid pulse ; the other accompanied by a very moderate disturbance of the circulation ; that the latter cases, which are by far the most numerous, recover ; that the former generally die." He also remarks :—

" There are some other circumstances to be taken into the account of the prognosis : the form of the derangement, and the period at which it occurs. Mania soon after delivery is more dangerous to life, than melancholia beginning several months afterwards. Nights passed in sleep, a pulse slower and firmer, even though the mind

continues disordered, promise safety to life. On the contrary, incessant sleeplessness, a quick, weak, fluttering pulse, and all the symptoms of increasing exhaustion, portend a fatal termination, even though the condition of mind may be apparently improved. In the cases which I have seen terminate fatally, the patient has died with symptoms of exhaustion, not with those of oppressed brain, excepting only one case."

As to the comparative duration and persistence of the several forms of puerperal insanity, and as to the probability of re-attack, his views are nearly in accordance with those now generally held. Among the causes, heredity is given the most importance as a predisposing, and exhaustion as an immediate cause. What we now speak of as a blood-poisoning, he alludes to as "something in the state of the constitution induced by lying-in or nursing," and gives its due weight in the production of insanity.

Of the pathology of mental disease, he concludes as follows:—

"But whatever may be the causes which excite these diseases, the most important question still remains to be considered—what is that morbid state of organization on which the disorder of the mind depends? this is the proper object of medical art. We have no power by medicinal agents of relieving a disordered mind, excepting indirectly through the disorder of the body with which it is connected. It is impossible therefore to stir one step in the treatment of the disease, without first ascertaining what this disorder is; or if different in different cases, what they are, how to discriminate them, and whether experience shows that one is more common than the other.

"There is a strong disposition, not only popular but professional, to attribute raving of the mind to inflammation of the brain.

* * * * * * *

"But experience and reflection lead to very different conclusions; they teach us that a disorder of the mind may be connected with very opposite states of the circulation, sometimes with inflammation or active congestion, for which depletion is the shortest and surest remedy; sometimes with an opposite condition of the circulation, which depletion will only aggravate.

"Cerebral excitement does not necessarily depend on inflammation or congestion; nor is depletion, however moderate, necessarily the proper remedy. Cerebral excitement is often aggravated by depletion; and in some cases, as I shall have occasion to relate, absolutely brought on by it. Now the question, what is the morbid state of organization on which puerperal insanity depends, must be determined in the usual way. There is only one safe mode of working

the problem, by observing the causes which brought on the disease, the bodily symptoms which accompany it, the way in which it is affected by remedies, and the morbid appearances discovered after death."

His remarks on treatment, while they have much value as hints for the general practitioner, do not sufficiently extend over the several forms and periods of puerperal insanity to give them special interest. As might be expected from his pathology, however, they indicate where they do not fully anticipate the progress which during the past thirty years has been made in this direction.

In his "Thoughts on Insanity as an object of Moral Science," Gooch takes ground distinctly in favor of the physical theory of insanity, as follows:—

"There are many diseases in which some of the faculties of the mind in a certain degree deviate from their natural state; such are the incubus or nightmare; severe and habitual indigestion, so often attended by lassitude of mind and depression of spirits; the hypochondriasis of liver disease; the strange and different forms of hysteria; and lastly, but most remarkably, fever attended by delirium: no one supposes these to be moral diseases; no doubt is entertained that the mind is affected by disease of the body; the mental symptoms are universally considered as the natural effects and signs of disturbance in the brain; a man of plain sense, therefore, familiarly acquainted with these facts, would naturally look upon insanity in the same light, unless some solid reasons can be given him to the contrary; where are such reasons to be found?"

After a full and candid consideration of the arguments for a moral theory of insanity, he sums up the matter in the following excellent remarks:—

"It appears, therefore, that emotions of mind are capable of disturbing the organs of the body, and that, though moral causes in themselves, they may be physical in their operation; that the adequacy of bodily disease to disorder the mind is not to be estimated by the degree in which it strikes the attention of the observer; that although the erroneous opinions of the insane are very similar to the singular opinions of the eccentric, they are very different in their nature and origin; that causes moral both in their nature and operation, are capable of influencing diseases which are avowedly physical, and that consequently their influence in insanity is no proof that it is a moral disease: lastly, that the physical theory of insanity is no

more a proof of materialism than many avowed instances of the influence of body over mind. I conclude, therefore, that there is no ground for the reasons which have led to the belief in the moral nature of insanity; if we take into the account the influence of physical causes in its production, as injuries of the head, parturition, drunkenness, the sun's heat, and the influence of medicinal remedies in abating or removing it, can we avoid taking it from the solitary and singular station which it holds as a moral affection, and replacing it among those in which an unnatural state of mind attends on bodily disease?

"If this was merely a speculative question, an inactive scepticism might be philosophical and justifiable; but it is one of the many we meet with in life which cannot be answered with mathematical certainty, but which should be settled as well as we are able, because they are necessary for action. It is no less a question than whether, in our search after a better theory and a more successful treatment of these diseases, we shall occupy ourselves in investigating the causes and treatment of disease in the brain, or in discussing whether insanity is an error of the perception, the imagination, or the judgment."

His comments upon the subjective phenomena of insanity, and the theories of its moral bearings, are very brief and hardly so satisfactory. That "when the body is healthy and the mind sane, our beliefs, emotions, and actions are produced by mental processes;" but that in madness this is no longer the case, and they are caused by a peculiar bodily state, will not, we are sure, accord with the conclusions of the most careful and experienced observers in the field of mental disease. "I have conversed," he says, in behalf of this theory, "with those who have recovered from derangement on the subject of their delusions, and have asked them what could have led them so firmly to believe such absurdities or impossibilities, what real or imaginary reasons they had; and they have told me that they had no reasons at all, that there was the thought in their mind, accompanied by the most undoubting confidence of its truth, but how it came they knew as little as how it went away."

Against this we can only place our own experience, and appeal to that of others. In our intercourse with insane patients, and in conversation with them after they had recovered, we have just as powerful, and precisely the same reasons for supposing that their actions,

emotions, and beliefs involve mental processes, as that they do so in the sane. In some cases the steps of the process are not at all times traceable by the observer; but the patient will afterwards give the clue to the whole. In others, the patient is apparently not conscious of, and does not afterwards remember the workings of his mind; yet they are entirely patent to the observer. In many cases, most likely to be those in which depraved emotions and violent acts have been exhibited, the patient simply practices deception and falsehood as to his mental experience. Sometimes this fallacy may be a premonition or a remnant of mental disease; often it is the self-deception of hysteria, and we are certain that in many strange instances it has been deliberate fraud. Here is ample room for the explanation of the comparatively few instances of "insane impulse" and "instinctive insanity" for which we are asked to account. Of these he says:—

"In those extraordinary cases in which persons have committed murder on those who have never offended them, and towards whom they felt no antipathy, it seems that they were sometimes urged by some strange impulse totally different to the sense of injury, and thirst for revenge, which impels the sane man to commit such acts. If we are right in supposing that the instincts of animals consist of reasonable acts, not preceded by any reasoning process, but subservient to some bodily sensations in the animal, there would be a striking analogy between the two conditions, and insanity might be said to be the temporary converson of human into animal nature."

We do not, it seems to us, need to make any such gratuitous assumption as that the reasonable acts of animals are produced differently from our own, to form an analogy for these cases. Because a certain revolting act would suppose a passion so extraordinary that the common mental experience can give no hint of its processes, we are not warranted in referring it to a blind impulse, or founding, upon this fact alone, any other hypothesis of irresponsibility.

For a more satisfactory notice of these points, the reader will turn with advantage to the learned and eloquent remarks of the prefatory essay. Dr. Ferguson, after having shown the fallacies of the phrenological scheme of mental organs, and in particular the absurdity of

monomania in which the "organ of volition" is alone affected, comes to the question of an instinctive monomania. We cannot more appropriately close this notice than by transferring entire this portion of the essay:—

"The passions and appetites, in their disordered actions, have been brought under this same theory of moral insanity, I think equally objectionably. It is asserted that they may act isolatedly, and become mad and rampant amid the serenity of a calm intellect, and in spite of right judgments. A sudden impulse to motiveless murder, for example, may at any moment turn the hand of a father against the child, or compel the husband to slaughter the wife, at the very instant that he warns her to escape. The analysis requisite to show the largeness of assumption in this theory, to point out the looseness of narrative of the facts adduced in favour of it, would be out of place here.

"I may state that there is no 'passion' without arousing mental phenomena. Lust has its images of dalliance; hate its malevolent emotions; avarice its crooked, grasping thoughts and mean persistencies; ambition and honour their issues, the nobility and worth of which are measured by motives. Whether these active 'affections' are accompanied by bodily sensations or not, is not the question. The point is, whether the appetites and passions exist without that mental armature which in the sane state we are certain forms their very essence, and is necessary to their fruition. The suddenness of an impulse may be granted. We know, however, only two conditions of mind in which this suddenness appears; viz., in the impulses of the madman, and in those of the criminal.* The moment the insane entertain 'suspicion,' that moment the sequences of passion follow; first fear, then hatred of the objects of that fear, and on the earliest occasion, destruction of that which, in his insane belief, the maniac thinks will relieve him of the burden of terror; there is no lack of motive, therefore, in accounting for the impulses of madness.

"When we see one who outwardly had hitherto stood well in the world's opinion, suddenly leap into the gulf of crime, our first desire is to examine the inner life of the man, and the investigation results in our finding either the evidences of madness, or the manifestations of mental depravity, in a long dalliance with criminal thoughts which have recurred again and again, entertained and repelled, with lessening horror, till the understanding becomes bewildered, the conscience silenced, and the will overpowered by the vehement temptation of the hour. Mentally the man had long been a criminal.

*This not being an exhaustive analysis, I have selected 'suspicion' as the commonest of those mental states through which the harmless maniac passes before he becomes dangerous.

"Such are the two conditions under which the impulsive passions of anger, fear, lust, &c., have hitherto been known to operate suddenly and dangerously. But now we are asked to acknowledge the existence of a third, under which there shall be exhibited the effects of madness in the presence of a perfectly sound intellect. As a Commissioner of Pentonville Prison, I had abundant opportunities of learning the natural history, so to speak, of crime, and its relation to mental disorder; and, without ransacking the labours of divine or moralist, or turning to the workings of our own hearts, I am convinced that the law of continuity is no more broken in the moral than it is in the physical world; and that a man in the plenitude of his intellect, entire in his moral judgment as to right and wrong, suddenly filled with unwonted and motiveless lust for murder, is a monstrosity, the existence of which must not be received without the most searching inquest."

SUMMARY.

INSENSIBILITY OF THE SKIN IN HYSTERIA.—We have received from M. Aug. Voisin, his "*Mémoire de L' Anesthésie Cutanée Hysterique*," read before the Society of Medicine in Paris, and given to the public in a closely-printed pamphlet of thirty-nine pages. In a brief historic notice of the principal writers on hysteria, the learned author pays a well-merited tribute to the name of Sydenham. In the very thorough discussion which follows, he makes the following divisions: 1. The relations that may exist between the attacks of hysteria and cutaneous insensibility. 2. The tendency of this insensibility to localize itself in one-half the body. 3. The co-existence there of excessive sensibility with the entire want of it. 4. The pathology of the sense of touch, and the treatment proper for the class of paralytic symptoms here considered.

Among the many valuable remarks which this paper contains, we notice the following as specially worthy of attention:—

"In cases of hysteria, cutaneous insensibility, with scarce an excep-

tion, pre-supposes that the attack was attended with loss of consciousness. In other words, loss of consciousness and the anæsthesia are related as cause and effect."

"My grandfather, Dr. Felix Voisin, in his '*Etude sur les Causes des Malaides Nerveuses*,' maintains that the immediate seat of hysteria is in the brain. My own opinion is that the anæsthesia of hysteria, may be traced directly to disturbance in the cerebro-spinal column. So intimate, however, is the connexion between this column and the brain, that the two ideas are not far apart."

"The existence in the same subject of insensibility and the liveliest sensibility, appears like a pathologic contradiction. For an explanation of this we are indebted to the careful researches of M. Briquet. According to him the insensibility belongs to the skin, the excessive sensibility to the muscles."

Amid some curious observations on the different qualities and conditions of the sense of touch, the author mentions a remarkable effect produced by the paralysis of this very part of the human frame. Where this sense is wholly gone, that of sight becomes the sole reliance. Blindfold the patient thus affected, and he can not even direct his hand to his mouth. An instance came under the eye of M. Briquet at La Charité, in which the patient, having her eyes blinded, was taken out of bed, placed on the floor, and then put back into bed, without the slightest consciousness that anything had been done to her. Another described her sensations when deprived of light, by saying that "she felt as if she had been plunged into utter emptiness."

The treatment of hysterical anæsthesia is involved in difficulty. Few efficacious remedies have as yet been found.

"For hysteria itself, preparations of iron and other tonics, belladona, and the anti-spasmodics, are the means in common use, though often unsuccessful."

"For the paralytic affections, we use friction, kneading of the flesh, strychnine, brucine, and the water-cure. Quite recently, M. Duchenne of Boulogne has applied local electricity in the cure of this disease. We have ourselves seen under the hands of M. Briquet, several cases suffering from *recent* anæsthesia, restored to feeling in the course of a few minutes, by the electric action. But cases of long standing resisted this treatment, as they had every other."

The author relates fifteen cases of hysterical anæsthesia, giving

with much minuteness of detail, the symptoms, course, and treatment of the disease, in each case.

THE NERVOUS EPIDEMIC CONNECTED WITH THE RELIGIOUS REVIVAL IN IRELAND.—One of the most powerful and wide-spread of those mysterious epidemics in which the functions of the cerebro-spinal system are temporarily disordered, has prevailed during the past six months in Ireland, and in different parts of Great Britain. It is apparently related to a religious revival in the evangelical churches, though the reality of a true spiritual influence being involved with it has been much questioned. A striking characteristic of the epidemic is the exact likeness which many of its features bear to those of epidemics of febrile and other diseases. When at its period of greatest height in one locality, it is in its decline in that just behind in its course, and is kindling up in the one in advance. Neither public expectation nor revival effort greatly hasten its approach, but its course is steady and regular, and manifestly by infection. Says a witness: "It was observed from the first, that the most illiterate convert who had himself been physically affected had far more power in producing the manifestations than the most eloquent and touching speaker who could address an assembly. There did not seem to be any proportion between the words uttered by the speakers and the results produced." The physical phenomena, in their complete form, are those of catalepsy. Those powerfully affected are struck down as in an epileptic seizure, and, for a greater or less time, the voluntary functions are suspended. In some cases there is also loss of consciousness. Moral manifestations follow, taking the usual forms of powerful conviction of sinfulness, and signs of the most acute mental anguish. Under a less degree of the disorder there are spasms and convulsive movements in great variety; and sobbing, laughing, singing, and wailing, are manifested without obvious cause or meaning. These are so general that the medical men and the press of Great Britain have usually described the epidemic as one of hysteria; though its subjects are by no means of one temperament, or of the female sex.

But however imperfectly technical language may describe these manifestations, they are, it is easy to see, governed by well-known physiological laws. Where the epidemic prevails among a people of a low grade of intelligence, the disorder will be manifested chiefly in the functions of the spinal cord, and catalepsy and convulsions will be presented. Epidemics of a similar kind in this country during the past fifteen years, arising among a people of more active intellect, have affected more the cerebral functions, and have developed hallucinations of all kinds, fanatical passions, and the wildest vagaries of belief. Of these, Millerism and Spiritualism are prominent instances. In a more robust and energetic people we have a greater degree of boisterousness and activity in the manifestations. This is illustrated in the history of the so-called "Backwoods Revivals," which occurred in our Western States, many years ago. Indeed, the manner in which the nervous contagion is modified in its effects by the condition of its subjects is precisely that which is observed in epidemics of cholera and yellow fever. In both cases, at the first appearance of the disorder only those in some way predisposed to its attack are affected, and the symptoms are not sudden or severe. But when the height of the epidemic is reached, persons are attacked almost indiscriminately, and with great power.

The relations which this epidemic has attained, through natural causes, or perhaps by a special providence, to evangelical religion, are, however, the most important of all. It is these which have excited, and are still giving rise to much discussion through the pulpit and the press of Great Britain. On the one side, it is claimed that the revival phenomena are almost wholly supernatural, and are to be encouraged in every form and direction in which they may be developed. While on the other hand, they are condemned as physical only, and tending solely to the hurt of morals and religion. A great amount of evidence statistical, historical, medical and theological, has been brought forward upon the subject, but the best and most learned still differ very widely in their conclusions.

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Probably in no country have these epidemics been so frequent and powerful as in our own, and nowhere is there so general an agree-

ment as to their character and their practical treatment. It has been observed that the conditions under which they are developed are similar, whether the manifestations are evangelical, Spiritual, Millennial, or any other. They usually have their rise in a profound stagnation of public concern regarding matters of religious and social interest, or, on the other hand, in occasions of panic or crisis. But while observation proves that they are reactive in their origin, experience shows that they all have both a retrograde and a corrective tendency. The physical manifestations are only evil in their effects, and we believe much more powerfully so than is generally considered. The moral manifestations have no necessary relations with the physical, and by careful, well-directed effort, especially in the early stages of the epidemic, may almost always be made to tend to beneficial results. Through the great Millennial epidemic many were brought to connect themselves with the evangelical churches, and even that of Spiritualism has, in some communities, been made to advance the interests of true religion. We have little doubt that if the experience of our own religious teachers in these revivals could direct the treatment of the Irish epidemic it might be made largely productive of good. But to this end a moderate, and above all a united sentiment and action are necessary. Between a gross superstition on the one side, and too great religious nicety on the other, the present opportunity may be sadly misimproved.

These nervous affections, as they have been observed especially in religious revivals, are treated in a most candid and philosophic spirit by a writer in the *Methodist Quarterly Review* for April last, and may, we suppose, be taken as a representative view of the phenomena, among a sect in connection with whose Christianizing efforts they have been most frequently manifested. The writer, treating of "Religious Catalepsy," considers the phenomena "as perhaps in the largest degree physical," and as far as possible to be discouraged. After an analysis of the manifestations, and treating of them from the side of physiology quite at length, he concludes as follows:—

"The first inference drawn from the above showing is, that there is danger of placing quite too much importance upon this occasional

feature of personal piety and of revivals of religion. We cannot resist the conviction that the cataleptic exercise is the slenderest of all evidences of the genuineness and depth of the work of grace. It is not a criterion of piety. A revival may be genuine which is thus characterized. One may be equally so which is not marked by a solitary example of catalepsy; and precisely so as to individual Christians in every stage of experience. It must not be taken as the test or measure of piety."

Only on one point, perhaps, must the medical observer differ from this experienced and learned minister. He considers that "nothing morbid, or in the slightest degree prejudicial to physical health, is assumed to attend or result from this sort of paralysis." Our own observations too fully confirm the plainest inferences from physiology, that these manifestations tend greatly to impair the nervous functions, and to superinduce various forms of positive disease. The moral exercises, though they may be in some cases dissipating to their subject, we know are oftener salutary in the highest degree. These can only be cautiously and reverently guided, howsoever extraordinary they may appear. But ecstasy, hallucination, hysteria, and catalepsy can have only an accidental relation to a spiritual illumination.

Suicide in England and Wales.—In the number for October, 1859, of *Winslow's Journal of Psychological Medicine*, is an article "On the Distribution of Suicides in England and Wales," in which the statistical view of the subject is aided by a map of the "suicide-fields," and by a series of elaborate tables.

The data for these statistics are the coroners' returns for the several districts, for the years 1856, 1857 and 1858. These returns have some defects, but they are such, it is thought, as to exercise only a slight influence over the comparative results. The following are the numbers of suicides committed in England and Wales during the years mentioned:—

1856.		1857.		1858.	
M.	F.	M.	F.	M.	F.
919	395	960	389	909	366

These figures give an average of 6.8 suicides of both sexes in every 100,000 of population during the time noted.

The relations of suicide to the several districts and counties for which the returns are made, show in general a greater degree of the evil as the centres of population and civilization are approached. There seems to be, however, very considerable exceptions to this rule, and such as are not easy of explanation. As an evidence that the tendencies are persistent in the several localities described, it is stated that an analysis of returns of suicides for 1838 and 1839, made by Dr. Parr, shows that the districts of greatest excess of suicides in the two years mentioned, were the same as in the three years 1856, 1857 and 1858.

The causes of these peculiarites in the distribution of suicides are very doubtfully indicated in this analysis. There seems to be no systematic agreement between the counties of greatest tendency to lunacy and those of greatest tendency to suicide; and there is no obvious relation between the statistics of drunkenness and those of self-murder. Neither is there any light thrown upon the subject by a consideration of sex, age, civil condition, occupation, or fortune, in connection with it. The most warrantable deduction from the statistics is considered by the writer to be, that *the average number of suicides decreases as the average amount of ignorance increases.* This was inferred by Dr. Farr in his analysis, and is supported by the French statistics of suicide and instruction for thirteen years, ending with those for 1848. If this be a correct inference, and if it be admitted as a general fact that education tends directly to produce suicide, we must indeed believe that the present systems of mental culture are in the greatest degree deficient.

Governor Magoffin of Kentucky on the Prohibition of the Marriage of Cousins.—In his late Message to the Legislature of Kentucky the Governor says:—

"By a single act of the Legislature you can save in the future an immense amount of suffering. You can diminish, according to the opinion of those who have fully investigated the subject, twenty per cent. of the number of imbeciles, insane, deaf-mutes, and blind children. Render the marriage of cousins illegal, and a great evil is at

once eradicated. At least from fifteen to twenty per cent. of all these sufferers are the offspring of cousins. A gentleman of science, of learning, and enlarged experience, who has for a long time paid a great deal of attention to this subject, recently informed me that he never yet had seen all the children so related sound in body and mind. There is always among some of them some defect, mentally or bodily. A large number of the pupils (so say the teachers) in the Deaf and Dumb Asylums are the children of cousins. At Danville there are four sisters, deaf and dumb, the children of cousins; they have two speaking brothers, both in delicate health. There is also, from another family there, a sister and brother, children of cousins. There is another instance of sister and brother there, also deaf and dumb, the children of second cousins, showing that the defect extends beyond even the second degree. In that institution at Danville, as in other States, I am informed from sixteen to twenty per cent. of the pupils are now, and always have been, the children of cousins. The State, when the parents or friends of these children are not able to provide for them, has to do it; and the instances are numerous where the burden falls on her to provide for and educate these mutes, insane blind, or imbeciles. She is weakened by so many of her citizens suffering these privations, and a heavy tax is thereby imposed upon her. Is it not her right and her duty to protect herself against the evil and expense by forbidding such unions, which nature forbids by the natural penalty she uniformly inflicts?"

M. Devergie on Transitory Insanity.—Those physicians who have devoted themselves to the treatment of insanity admit that, besides dementia, mania, and monomania, there exists an instantaneous, transient insanity, which they call *transitory*, and as the result of which an individual until then, in appearance at least, of sound mind, commits suddenly an homicidal act, and returns as suddenly to a state of reason.

Seek we, then, to define what ought to be understood by *transitory insanity*. It is not that species of insanity to which Marc and some other physicians have given the name—that is to say, the insanity which shows itself occasionally among epileptic individuals, or among those given to drunkenness; at least we do not understand the term thus. When the *delirious* act is manifested as a sequel of epilepsy, or of drunkenness, insane actions precede the criminal deed, and, after its accomplishment, traces of delirium persist for a certain time.

Is that transitory insanity which supervenes as a sequel of persistent emotions, since persistent emotions lead to monomania? The name does not apply here. Murder, committed under the influence

of *fanaticism*, *pride*, *hate*, *jealousy*, *choler*, or *love* has a *known* permanent cause, which acts incessantly upon the moral freedom, and which, in the end, dominates and vanquishes it, bringing about a criminal act.

Violent passions stupefy the judgment, but they do not destroy it; they lead the mind to extreme resolves, but they do not deceive it. In a word, the man then acts under the influence of propensities which end by governing, more or less, his actions. But his *conscience* deceives him not. He knows rightly that which he does; he understands the bearing and the consequences. Solely led astray by the passions which have dictated his acts, he trips up his conscience.

Bellart has said that, by assimilating the passions to mental alienation, immorality is justified: it is placed upon the same level as calamity. The man who acts under the empire of passion has commenced by suffering his will to become depraved. The man who acts under the influence of calamity obeys, as a machine, a force the power of which he cannot contend with.

Finally, it is not well to apply the term *transitory homicidal insanity* to that condition of mind which is developed under the influence of a nature originally depraved, and for which neither *education*, nor *precept*, nor *example*, nor *association*, nor even a *rigid social position* has done anything, but which has been entirely neglected by the individual thus unhappily born, as he falls little by little into infamy.

If, in some of these cases, the motive to action does not justify the action itself, doubt may arise in the mind of the physician; but the criminal act should not then be designated transitory insanity, because it has been gradually induced by social circumstances of an essentially vicious nature. All the causes that we have enumerated, taken singly or in their totality, explain perfectly, in a medical point of view, the delirious idea. Morally and legally speaking, they explain also, up to a certain point, the sudden eruption of an act of delirium; and they would warrant, in certain cases, the admission of extenuating circumstances. But, in addition to insanity developed under the influence of the causes named, it is possible to show another form of alienation to which the term *transitory insanity* ought to be applied —that is to say, a form to the ordinary observer without apparent premonitions, and without appreciable, proximate, or remote cause, manifested as suddenly as the explosion of powder, and ceasing completely with the criminal act. * * * * *

No incentive to the deed, either in passions not sufficiently repressed, or in an acquired fixed idea; antecedents and manners irreproachable; absence of hallucinations; outbreak of insanity manifested by a criminal act, and instantaneous return to reason as soon as the deed was accomplished—these are, according to us, the characters of transitory insanity. Nevertheless, the word *transitory*, perfectly just for

the world in general, in the sense that the madness is but transient, though the deed done be of the most criminal description, does not appear to me sufficiently exact for the physician. Individuals of the character described ought not to be considered of sound mind when an idea of crime has suddenly risen within them, when this idea has constituted with them a dominant and irresistible thought, stronger than *the Me*, stronger than the will.

Antecedents of family, divers acts of social life, propensities, tastes more or less perverted, tendencies to taciturnity, ideas of suicide, are often manifested many years before the explosion of the irresistible criminal idea. So that to say that *the passage from reason to insanity* can be hasty or instantaneous in the opinion of the physician is to commit an error. This state has prodromata, as every malady has; and, according to us, *if these prodromata do not exist*, it would be impossible to see in the reported criminal act an act of insanity.

Moreover, M. Lelut (*Recherches des Analogies de la Folie et de la Raison*, à la suite de son ouvrage *Le Démon de Socrate*, p. 318) has said, with much truth, in regard to this species of insanity, that at its commencement, and in the mental tendencies which are the predisposing or constitutional cause of it, insanity is still reason, as reason is already insanity (la folie est encore de la raison, comme la raison est déjà de la folie). This constitutes, for the physician, one of the first elements towards the solution of the question.

A second datum of great interest, in a medical and moral point of view, is the disproportion which exists between the enormity of the offence and the motive or interest which has led to its committal.

If we examine all the criminal processes which have been instituted on the occasion of similar offences, and which have, moreover, been diversely adjudicated upon, but which, for the physician, have been acts of madness, it will be seen that the motive which led to the committal of the deed was not, so far as its consequences were concerned, in relation with the action itself. In other words, the accused, in committing the crime, had in prospect the scaffold; and, even in the case of impunity from it, he derived frequently no advantage, material or moral, from the act which he had committed.

Now, every important act of a man of sound mind has one end. That end is the attainment of an advantage proportionate to the consequences of the act. When an individual stakes his life upon it, he hopes to obtain in exchange material or moral advantages, more or less considerable, and by which he expects to profit largely.

If it be asked what are the conditions under which the reputed criminal act is performed, we are at once struck with the want of foresight which has preceded and accompanied its fulfillment. Neither the moment of the deed nor the mode by which it has been effected have been the object of any premeditation. Moreover, the deed has

probably been committed at the most unfavorable moment, although the accused had had a thousand opportunities of effecting it in secret.

Far from avoiding justice, the insane individual, in other respects an upright man, comprehending quickly the enormity of the crime that he has involuntarily committed, occasionally—nay, most commonly—gives himself up to justice. In effect, the dominant notion has hastily ceased to exist; moral freedom has resumed its empire, and the so-called criminal has ceased to be mad.

If investigation is extended to the mental state of the paternal or maternal ancestors of the accused, it is common to find that one or more members of the family have committed suicide, or have had a more or less prolonged attack of insanity.

* * * * * * *

Lastly, (and this is a criterion of great value), if we investigate the offence from two different points of view, the hypothesis of a criminal act, and the hypothesis of an act of folly, in order that either view should be established, it is necessary that it should explain all the facts without effort, while the opposite view should present a series of improbabilities which at once strike the judgment and are inconsistent with experience. The last method leads the physician with the greatest certainty to a right apprehension of the facts; by it doubt is dissipated, conviction arrived at, and the conscience relieved. —*Extract from a paper read before the Imperial Academy of Medicine, Paris, and translated for Winslow's Journal of Psychological Medicine.*

Oxide of Zinc in the Treatment of Chronic Intoxication.—Dr. Marcet, in the *London Lancet* for April ult., gives the history of twenty-seven cases in which the grave nervous symptoms of chronic intoxication were treated with the oxide of zinc. This was at first given in doses of two grains twice a day, in the form of powder, an hour after each corresponding meal. The dose was generally increased in the ratio of two grains every three days, until the patient took six or eight grains twice a day. Thus sleep was soon induced, the trembling of the body and limbs rapidly disappeared, the patient no longer suffered from headache or giddiness, and the hallucinations vanished; and in the course of from three to six weeks the patient had recovered from a long and painful illness. The weakness, a common symptom accompanying the disorder, was very difficult to overcome, and often continued a long while after the individual was well in every other respect. Another fact noticed was the complication of chronic alcoholic poisoning with bronchitis and rheumatism, in which cases the effects of the oxide were less marked; and in these instances the

functional disturbance of the nervous system often gave way without any improvement in the co-existing disease. Accordingly, in these cases the author added to the treatment as soon as the effects of the oxide were exhausted. The results of the twenty-seven cases are as follows: Six continued attending: eleven cases had been discharged, cured; four left the hospital (Westminister), quite recovered; four, much improved; and two ceased attending after the first or second visit. "In cases of chorea, mild hysteria, paralysis, and lead palsy," Dr. Marcet adds, "the use of oxide of zinc gave but unsatisfactory results, and in the majority of cases of epilepsy it could not be considered an effectual remedy."—*Ranking's Half Yearly Abstract.*

New York Court of Appeals—October Term.—*Ingraham v. Baldwin—5 Selden, 45.—The contract of a lunatic is not void, but only voidable by the lunatic or those claiming by, through or under him; and not by strangers.*

The Court, per Gardiner, J.—"A lunatic is not absolutely disqualified from making a contract. The law will in certain cases even raise one by implication..—*Wentworth v. Tubb*, 20 Eng. Ch. Rep., 174. There is a strong analogy between a lunatic and an infant in relation to their power to contract. Either can oblige himself for necessaries, and the law provides for each a formal process by which to avoid their agreements.—17 Wend., 134, and cases; F. N. B., 202.

"Again, there was no privity between the defendant and the mortgagor shown, or proposed to be shown. * * * A stranger would have no more right to insist upon the insanity of the mortgagor to avoid a security executed by him, than in his infancy.

"The judgment must be affirmed with costs."

Judges Denio, Johnson, Taggart, Willard and Mason, concurred in the foregoing opinion.

Morse J. did not hear the argument.

Ruggles, Ch. J., gave no opinion.

Judgment affirmed. [*Western Law Monthly.*

On Cerebral Congestion and Encephalitis.—The points of resemblance between these two diseases are thus given by M. Calmeil in his recent "*Traité des Maladies Inflammatoires du Cerveau:*" These two pathological states manifest themselves almost constantly under the influence of the same causes; they affect equally the sensibility, intelligence, and movement; both have their seat in the capillaries of the encephalic nervous substance; both give rise to

sanguineous effusions; both appear to be excited by a modification, in every way the same, of the normal vitality; lastly, transitory and temporary congestive states are always apt to be transformed into double inflammatory states, whilst long-standing and moderate encephalitis is always liable to be intensely exaggerated at any moment by most violent attacks of congestion. It is difficult to conceive, then, what reasons can be advanced against the classing of temporary congestive fluxions with true encephalitis. Nevertheless, temporary cerebral congestions have certain traits peculiar to them. In their mode of invasion, of manifestation of the divers functional phenomena, and of the sanguine turgescence which accompany them; and in the promptitude with which the species of vital erethysm which determines the accumulation of blood towards the encephalon at the moment of explosion tends to decline and subside, we have excellent characteristics by which to distinguish them from other inflammatory manifestations of the intercranial nervous centres; but our opinion is, that henceforth we can only apply to them the name of attacks of temporary encephalitis, or attacks of temporary inflammatory cerebral congestion.—*Winslow's Journal of Psychological Medicine.*

New Buildings of the Penn. Hospital for the Insane.—The new edifice for the male patients of the Pennsylvania Hospital for the Insane, was formally opened on the 27th of October last, with appropriate ceremonies.

Except that it is to be under the same management as the old Hospital, and is to be complementary to it in treating only patients of one sex, this is properly a new institution. It is in all respects complete in itself, and has been built in the most substantial and approved manner.

Upwards of $275,000 have been contributed by voluntary subscription to this noble enterprise within the past three years, which include the period of the great financial panic. This is due mainly to the liberality and philanthropy of the citizens of Philadelphia. In a report of the proceedings at the opening, great and deserved credit is given to Dr. Kirkbride, Superintendent of the Penn. Hospital, through whose character and efforts the public charity has been so largely directed to this object.

We hope hereafter to give our readers an extended notice of the new institution.

Auscultation of the Head.—M. H. Roger, an hospital physician of Paris, has of late been in the habit of auscultating the head, especially of children. In chronic hydrocephalus he has discovered a cephalic souffle, which is, however, absent in meningitis and convulsions. The practical result of M. Roger's investigations is, that the auscultation of the head may reveal alterations of the blood, and that the *bruit de diable* heard in the carotids, in cases of chlorosis, is heard as well and more easily by applying the stethoscope to the head. In fact, it is sometimes extremely difficult to listen to the carotids of infants at the breast, or very young children. We find, on the other hand, in the report of the Academy of Medicine of Paris, that M. Nonat, another nosocomial physician, has discovered that chloro-anæmia is much more frequent in children than has hitherto been suspected: a *bruit de souffle* is heard, according to M. Nona, in eight out of ten children from one year old to puberty. This seems a rather large proportion.—*Lancet.*

Hospital for Epileptics.—We learn from the *Lancet* that in accordance with a suggestion of the late Dr. Marshall Hall, who took great interest in the pathology and treatment of epilepsy, a hospital for epileptics is about being established in London, and it is expected that the distinguished Dr. Brown Séquard, of Paris, will become one of the physicians of the institution.—*Med. and Surg. Reporter.*

Neuro-Hypnotism as an Anæsthetic.—The phenomena which have been noticed heretofore under the titles of mesmerism, animal magnetism, hypnotism, artificial somnambulism, etc., are at present receiving the attention of the medical faculty of Paris as a possible anæsthetic in surgical operations. In several instances most encouraging results are said to have been obtained.

Appointments.—Dr. S. W. Butler has been appointed Chief Resident Physician to the Philadelphia Lunatic Asylum, Blockley.

Dr. O. M. Langdon has been appointed Medical Superintendent of the Hamilton County (Ohio) Lunatic Asylum.

Dr. P. H. Loring has been appointed Assistant Physician to the Michigan Asylum for the Insane, at Kalamazoo.

MEDICAL JOURNALS RECEIVED.

Oesterreichische Zeitschrift für Practische Heilkunde. Vienna.
Annales Médico-Psychologiques. Paris.
Journal de la Physiologie de l' Homme et des Animaux. Paris.
Archives des Sciences Physiques et Naturelles. Geneva.
The Journal of Mental Science. London.
Quarterly Journal of Microscopical Science. London.
Dublin Quarterly Journal of Medical Science. Dublin.
The Dublin Medical Press. Dublin.
British and Foreign Medico-Chirurgical Review. London. N. York Re-print.
Ranking's Half-Yearly Abstract. London. Philadelphia Re-print.
New York Monthly Review, and Buffalo Medical Journal. Buffalo, N. Y.
New York Journal of Medicine. New York.
American Medical Gazette. New York.
American Medical Monthly. New York.
The Scalpel. New York.
North American Medico-Chirurgical Review. Philadelphia.
American Journal of the Medical Sciences. "
The American Journal of Dental Science. "
The Medical News and Library. "
The Medical and Surgical Reporter. "
The American Journal of Pharmacy. "
Journal of the Franklin Institute. "
Journal of Prison Discipline and Philanthropy. "
The Dental Cosmos. "
The American Law Register. "
Quarterly Summary of the Transactions of the College of Physicians of Philadelphia. Philadelphia.
The Virginia Medical Journal. Richmond, Va.
The Charleston Medical Journal and Review. Charleston, S. C.
Atlanta Medical and Surgical Journal. Atlanta, Ga.
Southern Medical and Surgical Journal. Augusta, Ga.
Oglethorpe Medical and Surgical Journal. Savannah, Ga.
New Orleans Medical and Surgical Journal. New Orleans.
Pacific Medical and Surgical Journal, San Francisco, Cal.
St. Louis Medical and Surgical Journal. St. Louis, Mo.
Nashville Journal of Medicine and Surgery. Nashville, Tenn.
Nashville Monthly Record of Medical and Physical Science. Nashville, Tenn.
Cincinnati Lancet and Observer. Cincinnati, Ohio.
The Western Law Monthly. Cleveland, O.
The Chicago Medical Journal. Chicago, Ill.
Chicago Medical Examiner. Chicago, Ill.
Peninsular and Independent Medical Journal. Detroit, Mich.